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Oceanic Observations of the Pacific

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OCEANIC OBSERVATIONS OF THE PACIFIC

1959

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OCEANIC OBSERVATIONS OF THE PACIFIC: 1959

SCRIPPS INSTITUTION OF OCEANOGRAPHY OF THE UNIVERSITY OF CALIFORNIA

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Preface

Oceanic Observations of the Pacific is a medium for publication of oceanographic data collected in the Pacific Ocean and its adjacent seas by the cooperating agencies. At the present time these agencies are Scripps Institution of Oceanography of the University of California, San Diego, California; Biological Laboratory of the Bureau of Commercial Fisheries, Honolulu, Hawaii (formerly Pacific Oceanic Fishery Investigations); Biological Laboratory of the Bureau of Commercial Fisheries, La Jolla, California (formerly South Pacific Fishery Investigations); Biological Laboratory of the Bureau of Commercial Fisheries, Seattle, Washington (formerly Pacific Salmon Investigations); Department of Oceanography of the University of Washington, Seattle, Washington; Inter-American Tropical Tuna Commission, La Jolla, California; Pacific Oceanographic Group of the Fisheries Research Board of Canada, Nanaimo, British Columbia; United States Navy Electronics Laboratory, San Diego, California. Certain cruises were carried out jointly as California Cooperative Oceanic Fisheries Investigations (CCOFI). The agencies cooperating in the CCOFI program are the Scripps Institution, the Biological Laboratory of the Bureau of Commercial Fisheries, La Jolla, the California Department of Fish and Game, the Hopkins Marine Station and the California Academy of Sciences.

Agencies, other than the cooperating agencies, who have directly sponsored cruises presented in this volume are the United States Coast and Geodetic Survey and the United States Naval Oceanographic Office (formerly United States Navy Hydrographic Office), both of Washington, D. C.

Cruises in which more than one agency participated are usually listed under the agency which had a greater part in collecting and processing the physical and chemical data.

A grant from the National Science Foundation has supported part of the cost of preparing these data for publication and most of the printing cost.

The present volume contains observations made in 1959. For each oceanographic station, values of temperature, salinity and oxygen are tabulated at observed and at standard depths. Computed values of density, specific volume anomaly or thermosteric anomaly, and geopotential anomaly are also tabulated at standard depths. In addition, some observations of phosphate, silicate, nitrite, and nitrate are included. The positions of the serial observations and the numbers of bathythermograph observations made in 1959 and during the period 1941 to 1959 are shown on charts. Information concerning each cruise is summarized in a table.

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Description of Observations

SIGNIFICANCE OF REPORTED OCEANOGRAPHIC DATA

Routine field measurements of oceanographic parameters by conventional methods are usually subject to at least the following random errors:

depth	±4 m (in the upper 1000 m)
temperature	±0.02°C
salinity	±0.03‰ (Knudsen titration) ±0.004‰ (conductivity bridge)
oxygen	±0.04 ml/L
phosphate	±0.05 to 0.1 μg at/L

The precision of measurements of temperature and of Knudsen determinations of salinity made in the field have been analyzed by Wooster and Taft (1958). The above estimate of the precision of measurements of salinity made routinely at sea by conductivity bridge is that of Strickland (1958b).

Interpolated values at standard depths are known with less precision, and the resulting uncertainty in specific volume anomaly and thermosteric anomaly at standard depths due to random errors in field measurements of temperature, salinity and depth is of the order of three centiliters per ton. Therefore, in this publication series it is the practice to report specific volume anomaly and thermosteric anomaly to no more than one part in 10^5 (one cl/ton) and geopotential anomaly to no more than the nearest dynamic centimeter.

It should be noted also that computations of salinity (from measured chlorinity) and density (sigma-t, specific volume anomaly and thermosteric anomaly) reported in this volume have all been based on the empirical equations and tables by Knudsen (1901) and Ekman (1908). Because of the inadequacy of our present knowledge of the equation of state of sea water (Eckart, 1958) and the uncertainty of the relationship between chlorinity and salinity (Carritt and Carpenter, 1959), it is possible that these computed values differ systematically from the absolute values. However, in the upper thousand meters at least, Reid (1959) has shown that the influence of such systematic errors on the accuracy of computed geostrophic flow is significantly smaller than the influence of errors in the determination of temperature, salinity, pressure and position.

NOTES ON PARTICULAR CRUISES

Cruises TO-59-1 and TO-59-2

The Scripps Tuna Oceanography Research Program (STOR) of the Scripps Institution of Oceanography made two cruises in 1959 which are known as TO-59-1 and TO-59-2. Physical, chemical and biological data from these cruises are listed in Special Scientific Report--Fisheries No. 420 (1962) of the United States Fish and Wildlife Service.

The main purpose of each cruise was to investigate the distribution of ocean properties in the Gulf of Tehuantepec, on the Pacific coast of southern Mexico, as part of a series of comparative observations in that area at different seasons. In addition, each cruise provided an opportunity for gathering information about the interrelationships of light, nutrients, thermal structure and biota in ocean waters along the Pacific coast of Mexico.

Vermilion Sea Expedition

On Vermilion Sea Expedition two research vessels conducted a geological and geophysical exploration of the Gulf of California from February to May. The work was supported by grants from the Office of Naval Research, the Bureau of Ships of the U. S. Navy and the American Petroleum Institute.

Dorado Expedition

SALINITIES: Salinity determinations by Knudsen method on Dorado Expedition were found to be too high by a mean value of 0.05‰. This difference was indicated by values as high as 34.76‰ reported at depths of 2000 meters or more where salinity is not expected to exceed 34.69‰. The Dorado salinity data were compared with the data of other cruises in the same region, especially with STEP-I Expedition (September-December, 1960) where salinity was determined by conductivity bridge. Because there is also considerable variability from station to station, the data are published as originally listed, without correction but with footnotes to indicate variation.

Costa Rica Dome Cruise

The Costa Rica Dome Cruise was conducted jointly by the Inter-American Tropical Tuna Commission and the Scripps Institution. The principal objective was a comprehensive physical, chemical and biological survey of the anticlinal thermal dome centered about 200 miles west of Costa Rica, Central America, at the eastern end of the boundary between the Equatorial Countercurrent and the North Equatorial Current. A secondary objective was a similar but less extensive survey of the waters within fifteen miles of Cocos Island.

MV Pioneer and MV Tordenskjold

The purpose of the hydrographic observations made by these two vessels on Cruises Ocean-1 and Ocean-2 from May to September was to permit investigation of relationships between physical, chemical and biological conditions and the abundance and distribution of salmon stocks, as determined by gill-net catches. Data were also collected by MV Tordenskjold in Bristol Bay of the Bering Sea for the King Crab Investigations.

The interpolations of values at standard depths were performed by the IBM Type 650 Magnetic-Drum Data-Processing machine in the Research Computer Laboratory of the University of Washington, using the three-point Lagrange curve based upon one point above and two points below the desired depth.

Cruises P-59-1 through P-59-4, NP-59-2, NP-59-3 and CS-59-3

The interpolations for values at standard depths and the determination of calculated depths were carried out on the ALWAC III-E digital computer at the computing center of the University of British Columbia. Interpolations were made by the two-point logarithmic method described by Fofonoff and Tabata (1958).

Cruise P-59-5

The interpolations for values at standard depths and the determination of calculated depths were carried out on the ALWAC III-E digital computer at the computing center of the University of British Columbia. Interpolations were made by the three-point parabolic method described by Froese (1960).

Cruise NP-59-1

The interpolations for values at standard depths and the determination of calculated depths were carried out on the ALWAC III-E digital computer at the computing center of the University of British Columbia. Interpolations were made by the three-point parabolic method described by Fofonoff and Froese (1958).

USCGSS Explorer and USS Staten Island

The interpolations for values at standard depths and determination of calculated depths were carried out by machine programs at the U. S. Naval Oceanographic Office, Washington, D.C. Interpolations were made by the three-point Lagrange method (U.S.N. Hydrogr. Off., 1960; Nat Oceanogr. Data Center, 1962).

Cruises BB-234 and BB-235

Interpolation of values at standard depths was performed by the IBM Type 650 Magnetic-Drum Data-Processing Machine in the Research Computer Laboratory of the University of Washington, using the three-point Lagrange curve based upon one point above and two points below the desired depth. Corrections were made for any peculiar interpolations which resulted from use of this method in the upper layers.

Cruise	Vessel	Dates of hydro casts	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	T and S obs at 10 m	No. of BT obs
CCOFI									
5901	Black Douglas[a]	16-30 i	18	32	0	0	50	9	97[b]
	Orca	7-20 i	9	41	0	0	50	16	108[b]
	Spencer F. Baird	7-27 i	32	73	0	0	105	35	216[b]
5902	Orca	6-28 ii	19	48	2	0	69	4	136[b]
	Paolina-T	7-14 ii	0	6	0	0	6	33	61[b]
	Black Douglas	12-25 ii	4	8	0	0	12	67	140[b]
5903	Paolina-T	17-28 iii	0	5	0	0	5	37	70[b]
	Stranger	12-15 iii	3	16	0	0	19	3	32[b]
	Orca	12-24 iii	0	9	0	0	9	70	122[b]
5904	Stranger	8-25 iv	17	39	0	0	56	19	120[b]
	Orca	8-26 iv	17	48	0	2	67	35	119[b]
	Paolina-T	8-24 iv	12	37	0	1	50	29	121[b]
5905	Black Douglas	7-25 v	2	14	0	0	16	76	134[b]
	Orca	7-26 v	1	26	0	0	27	97	154[b]
	Paolina-T	7-17 v	0	4	0	0	4	43	51[b]
5906	Black Douglas	10-26 vi	2	10	0	0	12	83	110[b]
	Horizon	15-19 vi	5	10	0	0	15	6	22[k]
	Paolina-T	24-30 vi	3	8	0	0	11	15	36[b]
	Orca	3-17 vi	2	6	0	0	8	78	131[b]
5907	Orca	10-27 vii	8	33	0	2	43	27	131[b]

O_2	PO_4-P	Depth determination: Usual No. Nansen btls	Depth determination: No. P therms/btl	Depth determination: Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
47	0	17	2	8	thermograph	100[c]	1444 drift btls[d]	Plankton volumes; pelagic obs; continuous marine mammal log; black-footed albatross records at ends of lines only
49	0	17	2	8	thermograph	61[c]	1318 drift btls[d]	Four phyto. tows on Line 93 (alternate horizontal and vertical); plankton volumes; pelagic obs; continuous marine mammal and bird logs
82	0	17	2	8	thermograph	130[c]	1380 drift btls[e]	Plankton volumes; pelagic obs; continuous marine mammal and bird logs
61	0	18	2	8	thermograph	68[c]	1128 drift btls[f]	Plankton volumes; pelagic obs; continuous marine mammal log; daytime albatross log
6	0	18	2	8	thermograph	37[c]	324 drift btls[g]	Plankton volumes; pelagic obs; continuous marine mammal and bird logs
12	0	18	2	8	thermograph	77[c]	648 drift btls[h]	Plankton volumes; pelagic obs
5	0	18	2	8	thermograph	41[c]	468 drift btls	Plankton volumes; pelagic obs; jig-line fishing; continuous marine mammal log; daytime albatross log
8	0	18	2	8	thermograph	21[c]	240 drift btls	Plankton volumes; pelagic obs; continuous marine mammal log; daytime albatross log
9	0	18	2	8	thermograph	78[c]	792 drift btls[g]	One oblique net tow and 10-m bottle ob at Uncle Sam's Bank; plankton volumes; pelagic obs; continuous marine mammal and bird logs; jig-line fishing
54	0	18	2	8	thermograph	74[c]	576 drift btls[h]	Plankton volumes; pelagic obs; continuous marine mammal log; daytime on-sta albatross log
66	0	18	2	8	thermograph	100[c]	912 drift btls[i]	Plankton volumes; pelagic obs; continuous marine mammal log; daytime on-sta albatross log
38	0	18	2	8	thermograph	77[c]	672 drift btls[g]	Plankton volumes; pelagic obs; continuous marine mammal and bird logs; jig-line fishing
16	0	18	2	8	thermograph	91[c]	504 drift btls[h]	Plankton volumes; pelagic obs; jig-line fishing
27	0	18	2	8	thermograph	121[c]	852 drift btls[g]	Plankton volumes; pelagic obs; jig-line fishing
4	0	18	2	8	thermograph	44[c]	444 drift btls[g]	Plankton volumes; pelagic obs; jig-line fishing
12	0	18	2	8	thermograph	94[c]	888 drift btls[j]	Plankton volumes; pelagic obs; jig-line fishing
15	0	17	2	9	thermograph	21[c]	240 drift btls[h]	Plankton volumes; pelagic obs
11	0	18	2	8	thermograph	18[c]	204 drift btls[h]	Plankton volumes; pelagic obs; jig-line fishing (no catch)
8	0	18	2	8	thermograph	85[c]	792 drift btls[h]	Plankton volumes; pelagic obs; jig-line fishing
39	0	18	2	8	thermograph	68;[c] 2[l]	562 drift btls[g]	Plankton volumes; marine life obs

Cruise	Vessel	Dates of hydro casts	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	T and S obs at 10 m	No. of BT obs
5907 (cont.)	Paolina-T	10-24 vii	13	37	0	2	52	29	107[b]
	Black Douglas	9 vii-1 viii	22	59	2	1	84	46	130[b]
5908	Orca	14-30 viii	20	44	0	2	66	33	150[b]
	Black Douglas	13-25 viii	19	43	0	0	62	29	108[b]
TO-59-2 Baja California (5908)	Hugh M. Smith	14-29 viii	18	31	0	0	49	15	161[n]
5909	Orca	9-16 ix	4	20	0	0	24	10	52[b]
	Black Douglas	21-27 ix	17	7	0	0	24	19	65
5910	Spencer F. Baird	9-26 x	22	63	0	0	85	7	182[b]
	Orca	9-21 x	7	42	0	2	51	15	118
	Black Douglas	17-29 x	18	39	0	1	58	17	126[b]
5911	Paolina-T	17-25 xi	6	24	0	0	30	9	79
5912	Orca	9-19 xii	6	33	0	0	39	10	72[b]
SIO									
TO-59-1	Stranger[a]	17 i-22 ii	9	4	19	0	32	0	182

O_2	PO_4-P	Depth determination: Usual No. Nansen btls	Depth determination: No. P therms/btl	Depth determination: Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
50	0	18	2	9	thermograph	77;[c] 2[l]	720 drift btls	Plankton volumes; pelagic obs; jig-line fishing
84	0	18	2	8	thermograph	130;[c] 3;[l] 1[m]	1234 drift btls[g]	Plankton volumes; pelagic obs; jig-line fishing
66	0	18	2	8	thermograph	33[c]	803 drift btls[h]	Plankton volumes; pelagic obs; marine mammal log; jig-line fishing
60	0	18	2	8	thermograph	89;[c] 2[l]	765 drift btls[h]	Plankton volumes; pelagic obs; jig-line fishing
49	48	18	2	8	thermograph	62[c] 2[o] 10[r] 74[t]	648 drift btls[h]	Samples for SiO_3-Si determination at 7 stas;[p] NO_2-N, 6;[q] NO_3-N, 8;[s] 12 phyto. vertical hauls, 50 m to surface, with 17-cm-diameter Hensen-type net; 2 Van Dorn-type plastic sampler casts to ±100 m on 13 noon stas to collect samples for chlorophyll a and productivity studies; 13 photometer lowerings to ±100 m to measure submarine daylight; incident solar radiation measurements by Eppley 10-junction pyrheliometer; primary production studies of carbon fixation by phyto., using the carbon-14 method; zooplankton and micronekton standing crops: plankton volumes; pelagic obs
24	0	18	2	8	thermograph	33[c]	312 drift btls[h]	Plankton volumes; pelagic obs; jig-line fishing
24	0	18	2	8	thermograph	42[c]	504 drift btls	Plankton volumes; pelagic obs; marine mammal log; jig-line fishing
85	0	18	2	10	thermograph	89[c]	1080 drift btls[h]	Plankton volumes; jig-line fishing
51	0	18	2	8	thermograph	62[c] 3[l]	696 drift btls[g]	Plankton volumes; jig-line fishing
57	0	18	2	10	thermograph	75[c] 1[l]	780 drift btls[h]	Plankton volumes; pelagic obs; jig-line fishing
30	0	18	2	9	thermograph	39[c]	636 drift btls[d]	Plankton volumes
39	0	18	2	9	thermograph	43[c]	684 drift btls[u]	Plankton volumes; marine mammal logs; jig-line fishing
32	29	18	2	10	thermograph	49[b] 25[c] 26[d] 19[e]	43 GEK	Two Van Dorn-type plastic sampler casts on hydro. stas to ±100 m for water samples for chlorophyll a standing crop and productivity studies; photometer lowerings to ±100 m to measure submarine daylight; continuous obs of incident solar radiation by Eppley pyrheliometer; determination of total phosphate content from samples taken at 12 stas; 24 phyto. hauls

Cruise	Vessel	Dates of hydro casts	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	T and S obs at 10 m	No. of BT obs
TO-59-2 Gulf of Tehuantepec	Hugh M. Smith[a]	4-18 ix	2	1	14	0	17	0	94
Vermilion Sea	Spencer F. Baird[a]	16 iv-24 v	15	7	19	6	47	0	240
SIO/IGY									
Dorado	Horizon[a]	12 vii-16 viii	1	0	3	15	19	0	121
IATTC/SIO									
Costa Rica Dome	Spencer F. Baird[a]	11 xi-6 xii	8	1	50	0	59	0	426[b]
SBL									
Ocean-1	MV Pioneer	24 iv-28 viii	49	6	38	0	93	0	161[a]

O_2	PO_4-P	Depth determination: Usual No. Nansen btls	Depth determination: No. P therms/btl	Depth determination: Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
17	17	18	2	8	thermograph	19[b] 15[c] 11[d] 13[e] 62[f]	32 GEK	Two Van Dorn-type plastic sampler casts on hydro. stas to ±100 m for water samples for chlorophyll a standing crop and productivity studies; submarine photometer lowerings to ±100 m to measure submarine daylight; continuous obs of incident solar radiation by Eppley pyrheliometer; samples for NO_2-N determination collected at Stas. 68 and 78; samples for NO_3-N determination collected at Sta. 68; 6 phyto. hauls
47	0	18	2	8	thermograph	0	-	Geological and geophysical exploration of the Gulf of California
0	0	20	2	12	thermograph	0	88 GEK	Current measurements with 26 neutrally buoyant ("Swallow") floats
58	58[c]	18	2	8	thermograph	13[d] 14[e] 10[g]	Roberts meter with parachute drogues	Samples for SiO_3-Si determination at 18 stas;[f] NO_2-N, 18;[f] NO_3-N, 18;[f] 5 stas to measure currents with reference to parachute drogue at 1000 m using modified Roberts meter; incident solar radiation measurements by pyrheliometer; radioactivity determinations; carbon fixation measurements by C-14 method; surface and subsurface samples to 200 m or less collected with Van Dorn plastic samplers to determine chlorophyll a concentration and primary production; water transparency measurements by submarine photometer cast to 100 m or less
92[b]	0	deep, 4 shallow, 11	2 2	4 6	-[c]	33[d] 33[e]	24-75 drift btls from 10 stas	Investigation of distribution and migration of salmon; gill-net fishing; 16 night surface hauls with modified Isaacs-Kidd trawl;[f] numbers of 10 different organisms and numbers of copepods (12 species) per cubic meter of water filtered during plankton hauls

Cruise	Vessel	Dates of hydro casts	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	T and S obs at 10 m	No. of BT obs
Ocean-2	MV Tordenskjold	25 v-3 ix	51	12	18	0	81	0	141[a]
King Crab Investigations	MV Tordenskjold	2 v-3 vii	43	0	0	0	43	0	170
POG									
PAPA, P-59-1	CGS St. Catharines[a]	25 i-3 iii	3	0	5	1	9	0	132
PAPA, P-59-2	CGS St. Catharines[a]	14 iv-31 v	10	3	10	3	26	0	149
PAPA, P-59-3	CGS St. Catharines[a]	8 vii-23 viii	6	0	19	0	25	0	149
PAPA, P-59-4	CGS St. Catharines	23 ix-2 xi	4	3	12	0	19	0	99

O_2	PO_4-P	Depth determination: Usual No. Nansen btls	Depth determination: No. P therms/btl	Depth determination: Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
53[b]	0	deep, 4 shallow, 11	2 2	4 6	-	33[d] 32[e]	-	Investigation of distribution and migration of salmon; gill-net fishing; 31 night surface hauls with modified Isaacs-Kidd trawl; numbers of 10 different organisms and numbers of copepods (12 species) per cubic meter of water filtered during plankton hauls
0	0	4	2	0	-	0	-	Survey of the benthic invertebrate fauna (pelecypods, gastropods, barnacles, decapod crustaceans, tunicates, and the majority of echinoderms) collected in the eastern Bering Sea using otter trawls and a box-type dredge[g]
9	6	18	1	6	132[b]	10[c] 1[d] 8[f]	500 drift btls released twice	Samples for SiO_3-Si determination at 9 stas;[e] NO_2-N, 4;[e] daylight Secchi disc readings; marine life log
19	4	18	1	4	149[b]	11[c] 2[d] 8[f]	500 drift btls	Samples for SiO_3-Si determination at 9 stas;[e] NO_2-N, 6;[e] NO_3-N, 2;[e] light attenuation obs; daylight Secchi disc readings; marine life log
7	0	16	1 or 2	2	149[b]	5[c] 2[d] 8[f]	1 parachute drogue	Samples for SiO_3-Si determination at 8 stas;[e] NO_2-N, 4;[e] 7 special casts for nutrient determinations using 10 Van Dorn plastic stainless steel bottles to measure T, S, O_2, PO_4-P, pH, Tot. Alk., SiO_3-Si, NO_2-N, NO_3-N and Mn (McAllister et al., 1959); surface nutrient samples by plastic bucket; samples to determine phyto. crop; radiation measurements by Fred Schuler underwater light meter; daily records of total solar radiation with Eppley pyrheliometer; light attenuation obs; daylight Secchi disc readings; marine life log
9	0	16	1 or 2	5	99[b]	10[c] 1[d] 9[f]	2 parachute drogues	Samples for SiO_3-Si determination at 8 stas;[e] NO_2-N, 4;[e] samples for C-14 and plankton pigment analyses; light attenuation obs; daylight Secchi disc readings; marine life log

Cruise	Vessel	Dates of hydro casts	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	T and S obs at 10 m	No. of BT obs
PAPA, P-59-5	CGS St. Catharines[g]	9 xii 1959-24 i 1960	5	2	11	0	18	0	107
NP-59-1	CNAV Oshawa	20 i-15 ii	12	3	54	0	69	0	76
CS-59-1	CNAV Oshawa[m]	31 iii-22 iv	115	8	18	2	143	0	176[n]
CS-59-2	CNAV Oshawa[m]	8 vi-1 vii	114	5	25	0	144	0	236[n]
NP-59-2	CNAV Oshawa[m]	4 viii-1 ix	10	3	11	56	80	0	151[n]
NP-59-3	CNAV Whitethroat[m]	4-29 viii	2	2	9	41	54	0	73[n]
CS-59-3	CNAV Oshawa[m]	16 xi-11 xii	84	5	6	0	95	0	119[n]
USCGS									
	USCGSS Explorer	26 v-18 vi	3	0	1	1	5	0	121
USNOO									
	USS Staten Island	10-11 ix	4	0	0	0	4	0	27[a]
UW									
BB-234	Brown Bear[a]	18-29 vi	38	5	14	0	57	0	126
BB-235	Brown Bear[a]	16-31 vii	7	1	9	0	17	0	165

O_2	PO_4-P	Depth determination: Usual No. Nansen btls	Depth determination: No. P. therms/btl	Depth determination: Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
10[h]	0	16	1	5	-	3[c] 2[d] 9[k]	-	Samples for SiO_3-Si determination at 10 stas;[i] NO_2-N, 6;[j] 3 casts with Van Dorn 5-liter samplers to obtain samples for photosynthesis rate measurements by the carbon-14 method and phyto. pigment determinations; vertical light extinction measurements to 70 m during calm weather; daylight Secchi disc readings; marine life log
69	0	19	1 or 2	4	at BT[l]	43[c]	-	Marine life log
142[o]	0	13	1	3	at BT[l]	35[c]	-	Special study of Saanich Inlet (Stas 1-5); 22-hr anchor-sta series (Stas 70-83) near McIsland lightstation; daylight Secchi disc readings
144[o]	0	20[p]	1 or 2	4	at BT[l]	71[c]	measured at 3 anchor stas	Samples for NO_3-N determination at 3 stas;[e] special study of Saanich Inlet (Stas 1-7); 3 25- to 30-hr anchor stas (Nos. 5, 34, 74; see pp. 766, 769, 771); current measurements at anchor stas, using an Ekman current meter and a 2-m drift pole; daylight Secchi disc readings
80[o]	0	23[p]	1 or 2	9	at BT[l]	61[c] 9[k]	-	Daylight Secchi disc readings; marine life log
54[o]	0	25[p]	1 or 2	10	at BT[l]	37[c]	408 drift btls from 3 stas	Daylight Secchi disc readings; marine life log
95[o]	0	17[p]	1	4	at BT[l]	0	-	Special study of Saanich Inlet (Stas 1-5) including 32-hr anchor sta; current measurements at anchor sta, using an Ekman current meter; daylight Secchi disc readings
0	0	6	2	4	-	0	3 parachute drogues	7 cores, using Phleger corer (5 at hydro stas)
0	0	8	2	2	-	0	-	1 core
57	19	13	2	4[b]	69[c]	29;[d] 3[e] 12;[f] 42[g]	-	3 midwater trawls at 85 m, of approx. 20-minute duration
17	17	12	2	6[b]	148[c]	23[h]	-	80 midwater trawls varying in depth sampled from 35 to 480 m and varying in duration from 35 to 75 min; chlorophyll and productivity measurements on all stas at 4 depths per sta

General Methods

Unless otherwise indicated, subsurface temperature by paired reversing thermometers; salinity by Knudsen method (reported to hundredths) or by conductivity bridge (reported to thousandths); dissolved oxygen by Winkler method aboard ship; inorganic phosphate by the molybdenum-blue method (Wooster and Rakestraw, 1951).

When available, specific information on accuracy is indicated by footnotes. Absence of such information does not imply that the nominal accuracies have been achieved.

CCOFI

a CCOFI thermometer calibrations indicate the temperature accuracy to be 0.02°C; field tests indicate a salinity accuracy of ±0.025‰ (root mean square).

b Lowerings with 450-ft BT on station, "underway" between stations (ship stopped), and for calibration checks.

c Oblique plankton tow to approximately 140 m (200 m of wire out, or less in shallow water) taken with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length with detachable cod end of 56XXX nylon grit gauze.

d Total number released, 12 ballasted and 12 unballasted at each designated station.

e Total number released, 12 ballasted green bottles per station except on Sta. 157.10 where 24 were released.

f Total number released, 12 or 24 per designated station as scheduled.

g Total number released, 12 ballasted bottles per designated station.

h Total number released, 12 per designated station.

i Total number released, 12 per station except on Stas. 73.70, 73.80 and 73.90 where 12 ballasted and 12 unballasted clear glass bottles were released.

j Total number released, 12 per designated station except Stas. 93.28, 100.29 and between South Coronado Island and the mainland where 24 were released.

k On-station observations only.

l Oblique plankton tow to approximately 424 m (600 m of wire out, or less in shallow water) taken with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length with detachable cod end of 56XXX nylon grit gauze.

m Special plankton tow on Uncle Sam's Bank.

n Approximately half of lowerings made with 900-ft BT.

o Horizontal plankton tow taken just below the sea surface with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length with detachable cod end of 56XXX nylon grit gauze.

p Silicate measured by forming the silicomolybdate complex followed by reduction with metol-oxalic acid solution; final determination by Beckman DU spectrophotometer (Strickland, 1958a, b). Variations in reagent blanks resulted in errors of ±0.05 μg at/L.

q Nitrite measured by diazotization with sulfanilamide followed by coupling to N (1 naphthyl) ethylene diamine; final determination by Beckman DU spectrophotometer (Strickland, 1958a, b). Variations in reagent blanks resulted in errors of ±0.02 μg at/L.

r Oblique high-speed micronekton haul in the upper 90 m of water at night stations at a speed of 5 kt, using a very coarse-meshed plankton net about 20 ft in over-all length with a 5-ft-square mouth opening, terminating in a detachable meter-net cod end of 56XXX nylon grit gauze.

s Nitrate measured by reduction to nitrite with hydrazine. Analyses for nitrate were less satisfactory than for nitrite and silicate: duplicates sometimes did not agree to within ±5 per cent of a mean value, in which case the results were rejected. The slope of the nitrate calibration curve varied greatly from station to station, probably because of the motion of the ship. Variations in reagent blanks resulted in errors of ±0.1 μg at/L for nitrate.

t Micronekton surface haul taken with a high-speed conical nylon net 70 cm in diameter at mouth by about 8-1/2 ft in over-all length, with detachable meter-net cod end of 56XXX nylon grit gauze, towed in the upper 10 m with 50 m of wire out at a speed of 9 to 10 kt for periods of from 2 to 3 hours.

u Total number released: 24 from all hydrographic stations on Lines 77 and 80; on Lines 83, 87, 90 and 93, 12 from each inshore station and each offshore hydrographic station.

SIO

a Thermometer calibrations indicate the temperature accuracy to be 0.02°C; field tests indicate a salinity accuracy of ±0.025‰ (root mean square).

b Oblique plankton tow to approximately 300 m (450 m of wire out, or less in shallow water) taken with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length with detachable cod end of 56XXX nylon grit gauze.

c Horizontal plankton tow taken just below the sea surface with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length with detachable cod end of 56XXX nylon grit gauze.

d Horizontal plankton tow taken with a closing Clarke-Bumpus net with a mouth diameter of 25 cm. Routinely a series of three 15- or 30-minute hauls was made at each station where the samplers were used: one haul in the center of the mixed layer, one in the thermocline, and one well below the thermocline.

e Oblique high-speed micronekton hauls in the upper 90 m of water at night stations at a speed of 5 kt, using a very coarse-meshed plankton net about 20 ft in over-all length with a 5-ft-square mouth opening, terminating in a detachable meter-net cod end of 56XXX nylon grit gauze.

f Micronekton surface haul taken with a high-speed conical nylon net 70 cm in diameter at mouth by about 8-1/2 ft in over-all length, with detachable meter-net cod end of 56XXX nylon grit gauze, towed in the upper 10 m with 50 m of wire out at a speed of 9 to 10 kt for periods of from 2 to 3 hours.

IATTC/SIO

a Salinity determinations by University of Washington-Pacific Naval Laboratory conductivity salinometer (Paquette, 1958). The 1023 salinity values are the means of duplicate determinations except in six cases in which there was a single determination and forty-one cases in which a triplicate determination was necessary. The standard deviation from the means of the 976 duplicate determinations was 0.022‰.

b BT lowerings to 125 m on station and every 10 miles in the Dome area; to 270 m every 30 miles north of 12°N.

c Inorganic phosphate determined by the method described by Strickland (1958a) except that the extinction coefficient k was determined by Wooster and Rakestraw (1951).

d Standard surface zooplankton haul taken with a net, 1.0 m in mouth diameter, of nylon grit gauze (No. 452 Nitex in the body and No. 295 Nitex in the rear section and cod end). A Tsurumi flowmeter was mounted in the mouth. The net was towed from the side of the ship with about 15 m of wire out, usually at a depth of less than 5 m, for a period of 15 minutes.

e Standard oblique zooplankton haul taken with a net, 1.0 m in mouth diameter, of nylon grit gauze (No. 452 Nitex in the body and No. 295 Nitex in the rear section and cod end). The net was lowered from the surface to a depth of approximately 300 m (450 m of wire out) at a rate of 50 m per minute while the vessel moved slowly underway and it was retrieved at a rate of 20 m per minute. (Duration of a single haul, therefore, was about 32 minutes, on the average.) A Tsurumi flowmeter was mounted in the mouth of the net to record the volume of sea water filtered by the net.

f Water samples were filtered, frozen and stored for analyses ashore to determine nitrite, nitrate and silicate concentration using the methods given by Strickland (1958b).

g Simultaneous horizontal closing-net hauls were made with enlarged Clarke-Bumpus samplers using nylon grit gauze (No. 706 Nitex in the body and No. 316 Nitex in the cod end). A Tsurumi flowmeter was mounted in the mouth. Three Clarke-Bumpus samplers were fastened to the wire so that, when lowered, they sampled depths above, in and below the thermocline, or above, in and below the oxygen minimum layer; the samplers were kept open for 30 minutes during the tow and the wire angle was kept as close as possible to 45°.

SBL

a BT lowerings to 275 m.

b All oxygen samples except those collected on the return voyage were analyzed by Winkler method in Adak, Alaska, through the cooperation of the U. S. Navy. (The other samples were analyzed in Seattle.)

c An experimental temperature-conductivity cell was towed astern to provide a continuous record of surface temperature and salinity. The cell, designed and constructed by the Fisheries Instrumentation Laboratory, Seattle, requires further modifications and improvements before it can be considered operational (Favorite et al., 1961).

d Vertical haul with one-half-meter net, No. 6 mesh, at about 50 m per minute from 30 m to surface.

e Vertical haul with one-half-meter net, No. 6 mesh, at about 50 m per minute from 150 m to surface.

f Trawl towed at the surface at 6 kt for 15 minutes about one hour after evening twilight in vicinity of gill nets, weather permitting.

g The otter trawls were towed on a straight-line course at approximately 3 miles per hour for 1-hour periods at stations spaced at 20-mile intervals throughout the area. The trawl used was a standard "400 mesh eastern" type with a 94-ft-long footrope. To assure the retention of smaller organisms, the trawl was modified by inserting a 1-1/2-inch mesh lining to the cod end. The box-type dredge was used for additional sampling at some stations. The galvanized screening of the dredge had four openings to the inch; in addition, it was lined with 1/8-inch mesh netting (McLaughlin, 1963).

POG

a Salinity samples were analyzed ashore in a modified Wenner-Smith-Soule conductivity bridge; accuracy, ±0.01‰.
b A bucket surface temperature, using a chemical thermometer graduated in 0.5°C intervals, was obtained at each BT ob.
c Vertical plankton tow, 150 m to surface, using a net one-half m in diameter, of mesh size 0.33 mm, hauled in at a speed of one m per second.
d Vertical plankton tow, 1250 m to surface, using a net one-half m in diameter, of mesh size 0.33 mm.
e Chemical analyses aboard ship using the methods described by Strickland (1958a, b).
f Surface horizontal plankton tow of 20-minute duration one hour after sunset (series of three made on consecutive evenings at the beginning, middle and end of cruise).
g Salinity values are the means of duplicate determinations. The correct value lies in the range of ±0.004‰ at the 95% probability level (Strickland, 1958b).
h Dissolved oxygen by a modified Winkler method, generally from a single determination, except those samples from depths greater than 2000 m which are from duplicates. The correct value lies in the range ±0.003 mg at/L (Strickland and Parsons, 1960).
i Silicate by the method of Mullin and Riley. Values are from a single determination of each analysis. Method and limits of accuracy explained by Strickland and Parsons (1960).
j Nitrite by the method of Bendschneider and Robinson. Values are from a single determination of each analysis. Limits of accuracy and method explained by Strickland and Parsons (1960).
k Surface horizontal plankton tow of 10-minute duration hauled at a speed of 2-3 kt (series of three made on consecutive evenings at the beginning, middle and end of cruise).
l A bucket temperature, using a chemical thermometer graduated in 0.5°C intervals was obtained at BT obs between stations.
m Determination of salinity aboard ship using a conductivity salinometer (Paquette, 1958; Strickland, 1958a).
n BT obs on station and midway between stations on the 200-mile offshore sections.
o Dissolved oxygen by Winkler method described by Strickland (1958a).
p Fjarlie sampling bottles sometimes used.

USNOO

a Hourly observations obtained with 450-ft BT in the area where hydrographic stations were occupied.

UW

a Salinity determinations by University of Washington-Pacific Naval Laboratory salinometer which is a modification of the Wenner-Smith-Soule salinity bridge (Paquette, 1958). All values reported are the means of duplicates. Such values have a reproducibility of ±0.004‰ salinity at the 95 per cent probability level and a probable accuracy of ±0.01‰ salinity or better at the same level of probability.
b Usual number on deep stations.
c Obtained in conjunction with underway BT obs.
d Oblique plankton tow taken with Clarke-Bumpus net 14 cm in mouth diameter, 1.0 m in length, of No. 6 mesh. One sampler only was used on the wire for each tow. Sampling depths varied, ranging from 0 to 230 m, and duration varied, usually between 15 to 30 minutes.
e Horizontal plankton tow taken with Clarke-Bumpus net 14 cm in mouth diameter, 1.0 m in length, of No. 6 mesh. One sampler only was used on the wire for each tow. All tows were made on Sta. 20: No. 1 at 64 m, No. 2 at 56 m and No. 3 at 35 m.
f Stepped plankton tows taken with Clarke-Bumpus net 14 cm in mouth diameter, 1.0 m in length, of No. 6 mesh. One sampler only was used on the wire for each tow; usually tows lasted 5 minutes at each of three depths or 10 minutes at each of two depths, the depths ranging from 0 to 150 m.
g Vertical net tows, surface to approximately 200 m, using half-meter net, 50 cm in mouth diameter, 1.5 m in length, of No. 6 mesh, and from approximately 12 to 20 minutes in duration.
h Vertical net tow, surface to approximately 400 m, using half-meter net, 50 cm in mouth diameter, 1.5 m in length, of No. 6 mesh, and from 12 to 20 minutes in duration.

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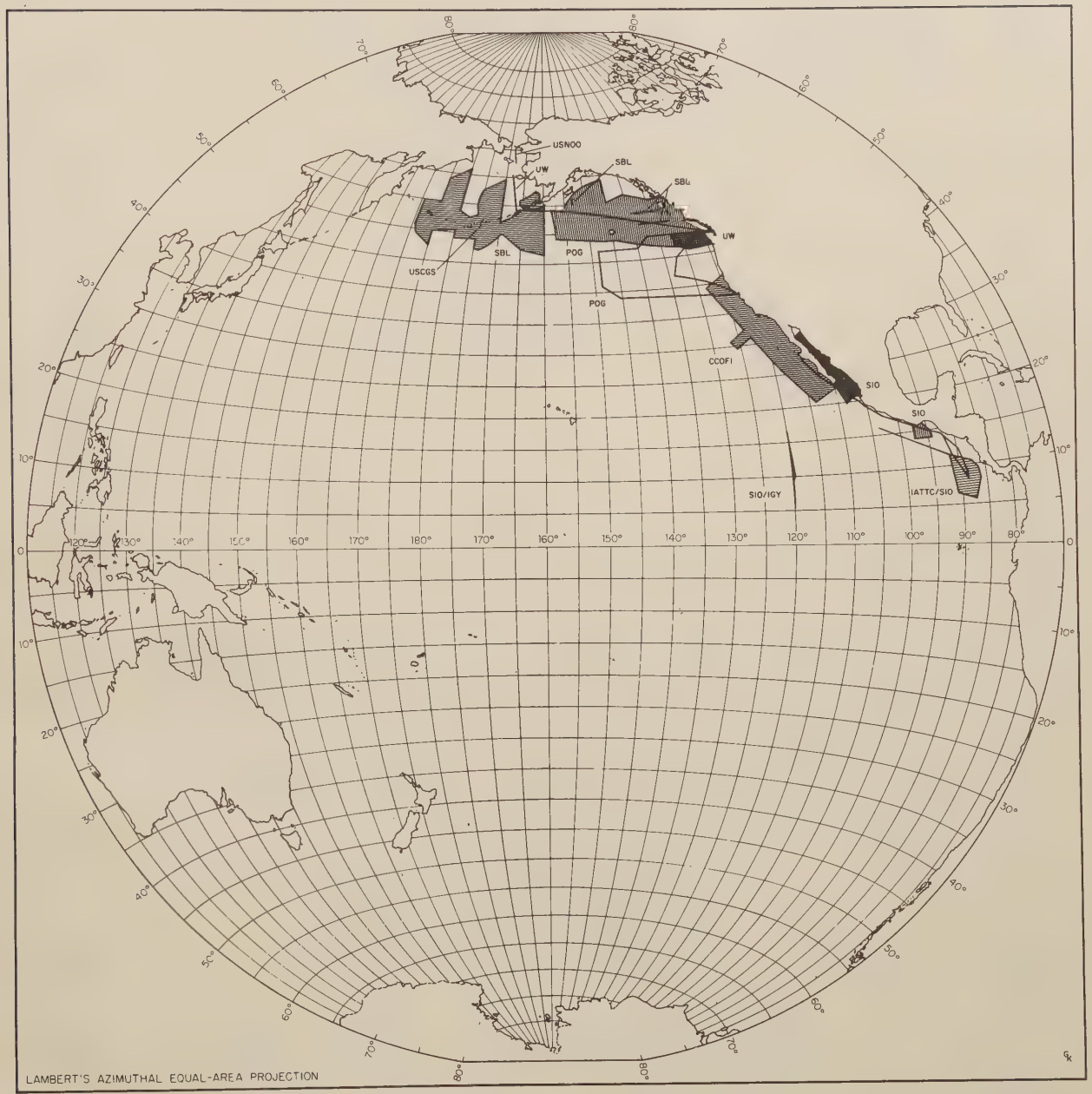

CHART 1. General location chart

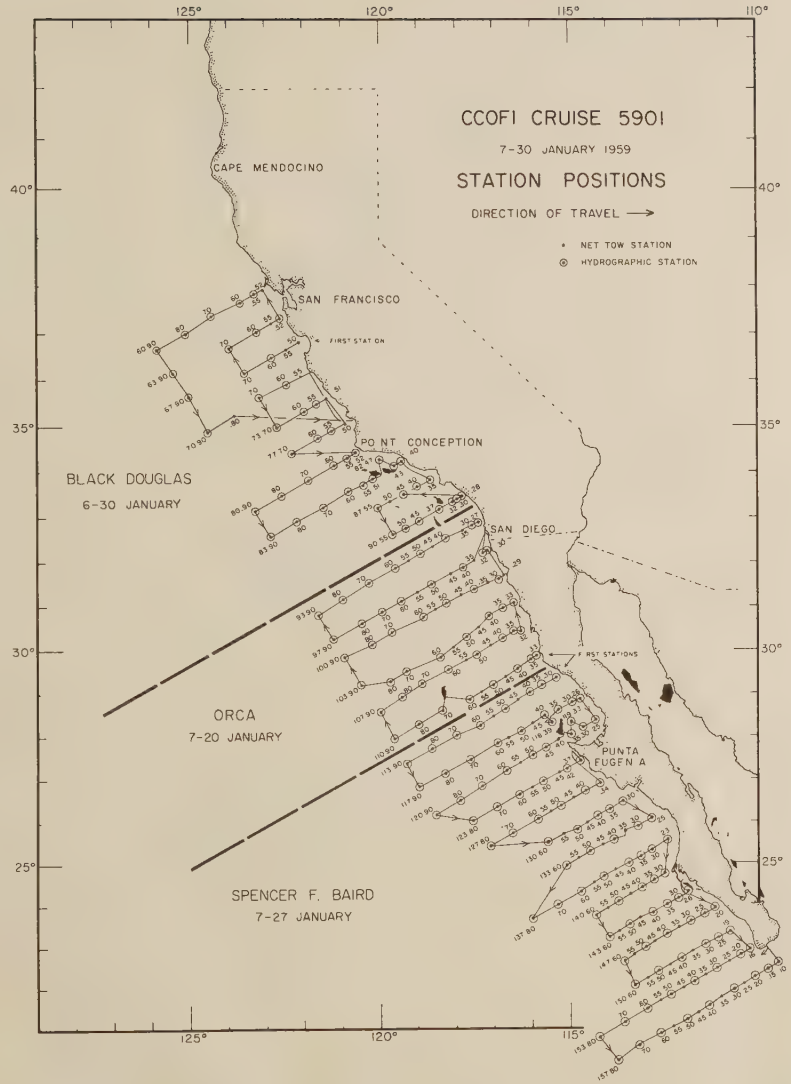

CHART 2. Station positions, CCOFI, Cruise 5901

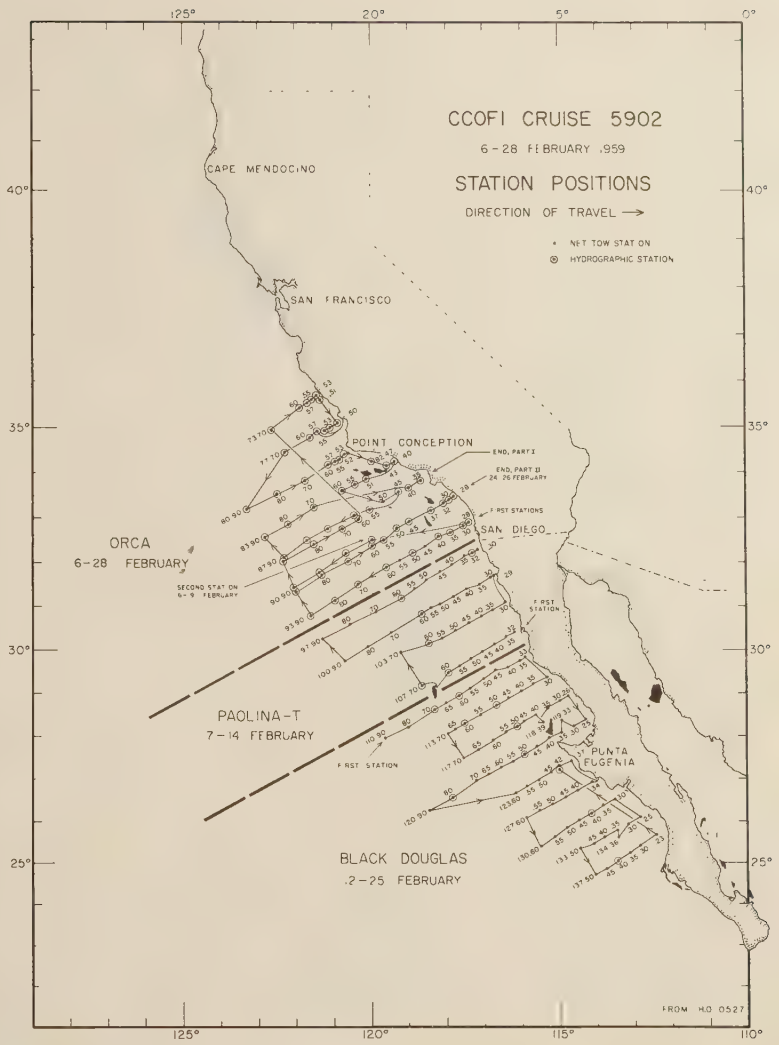

CHART 3. Station positions, CCOFI, Cruise 5902

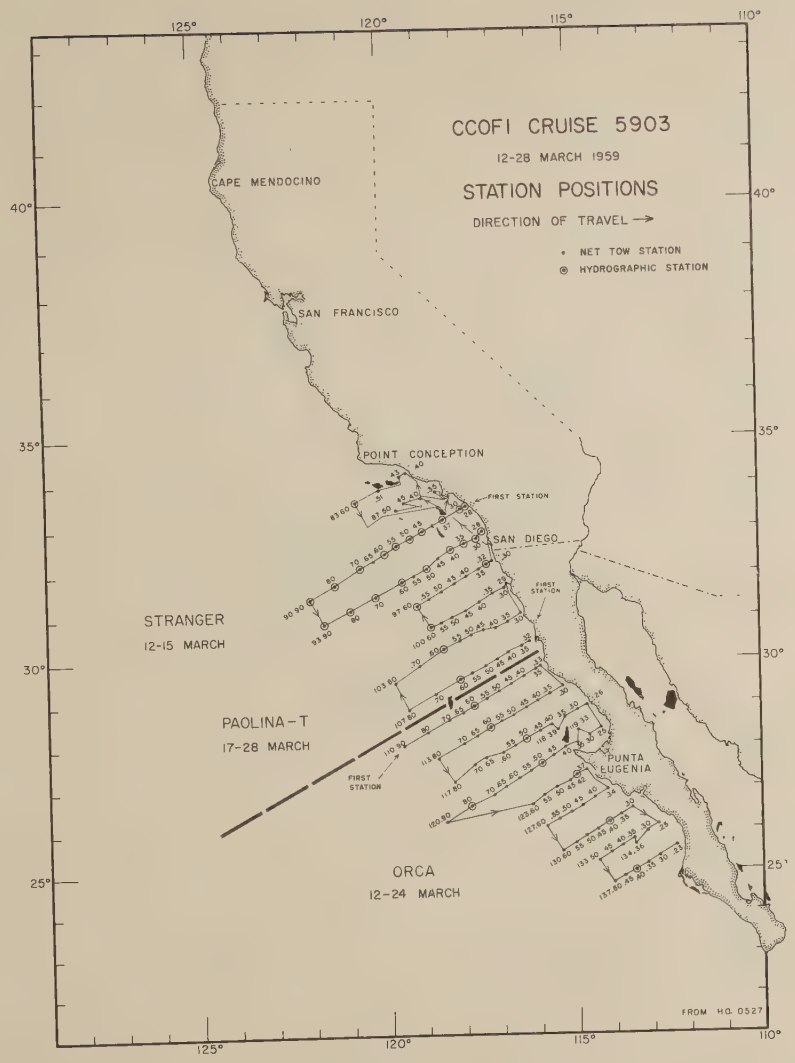

CHART 4. Station positions, CCOFI, Cruise 5903

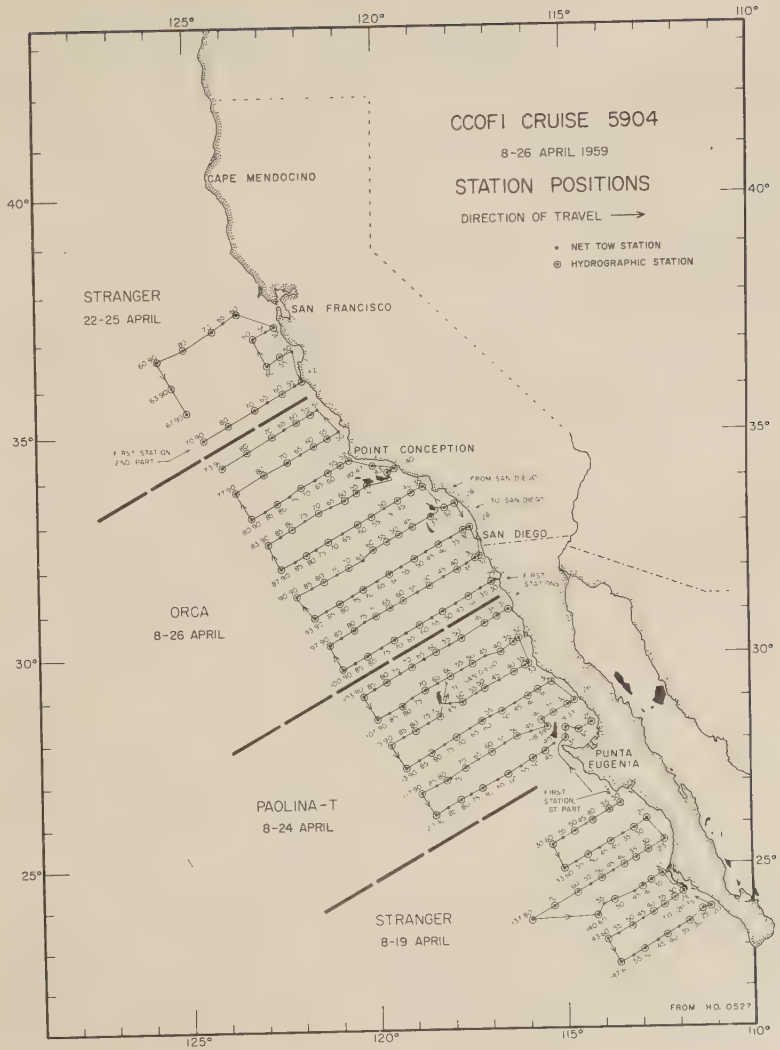

CHART 5. Station positions, CCOFI, Cruise 5904

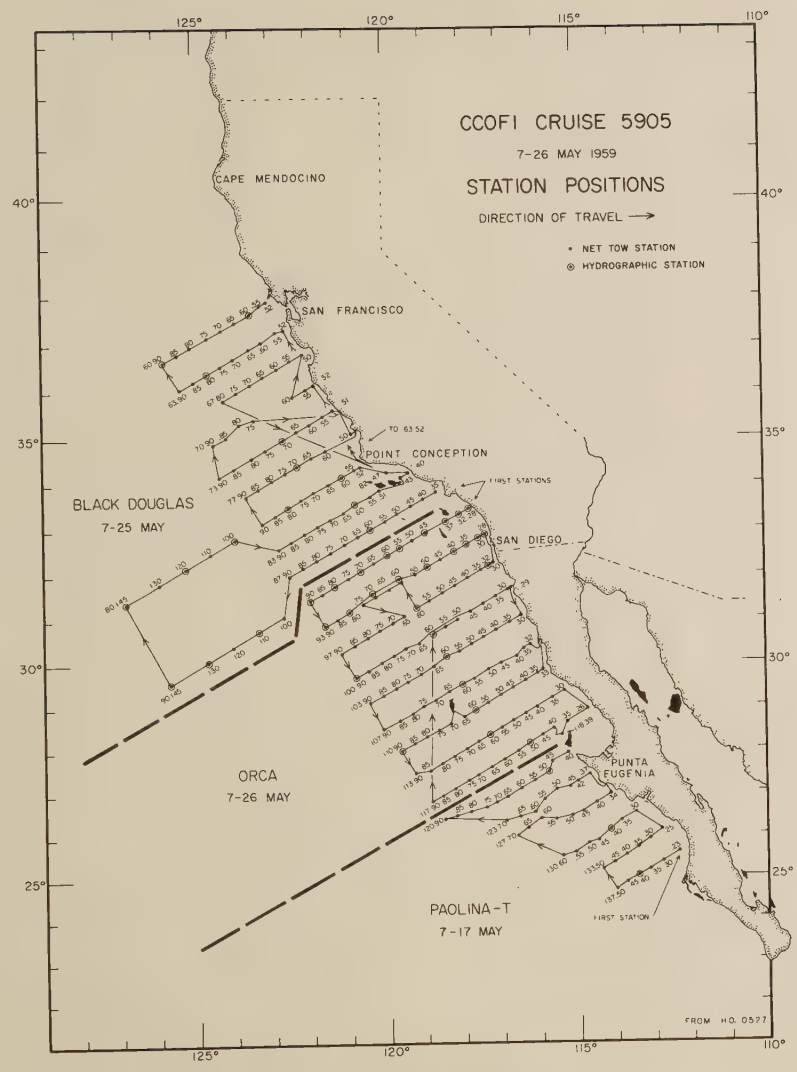

CHART 6. Station positions, CCOFI, Cruise 5905

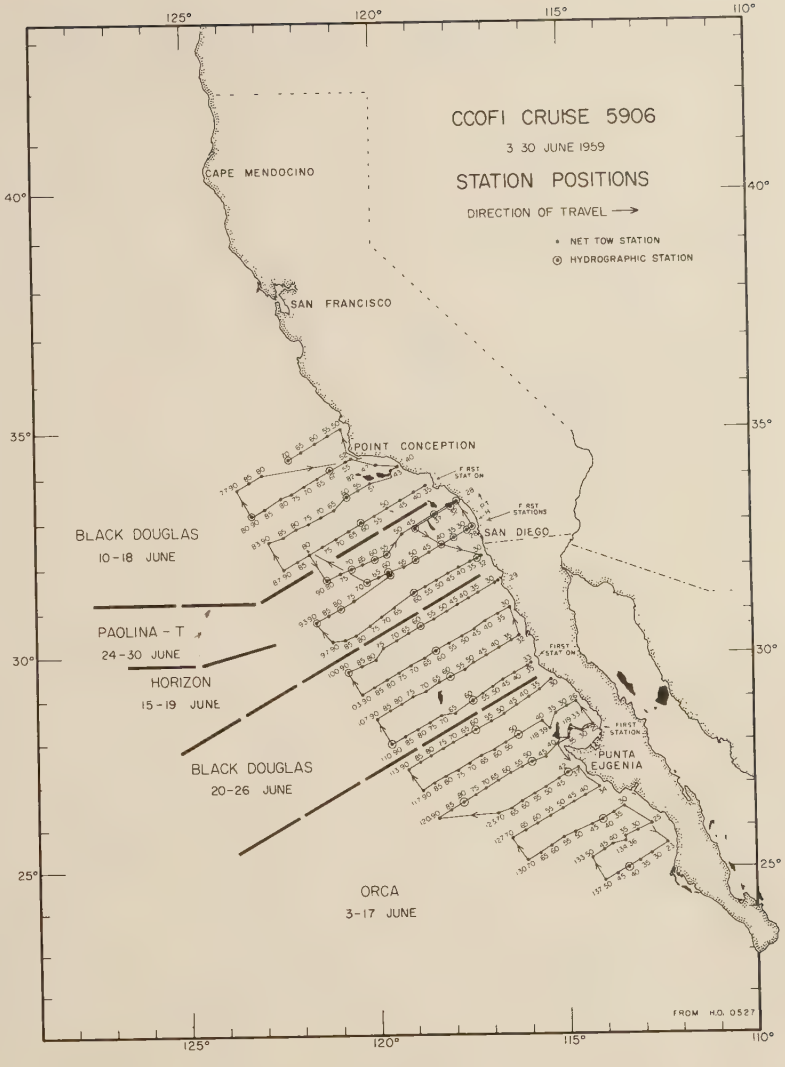

CHART 7. Station positions, CCOFI, Cruise 5906

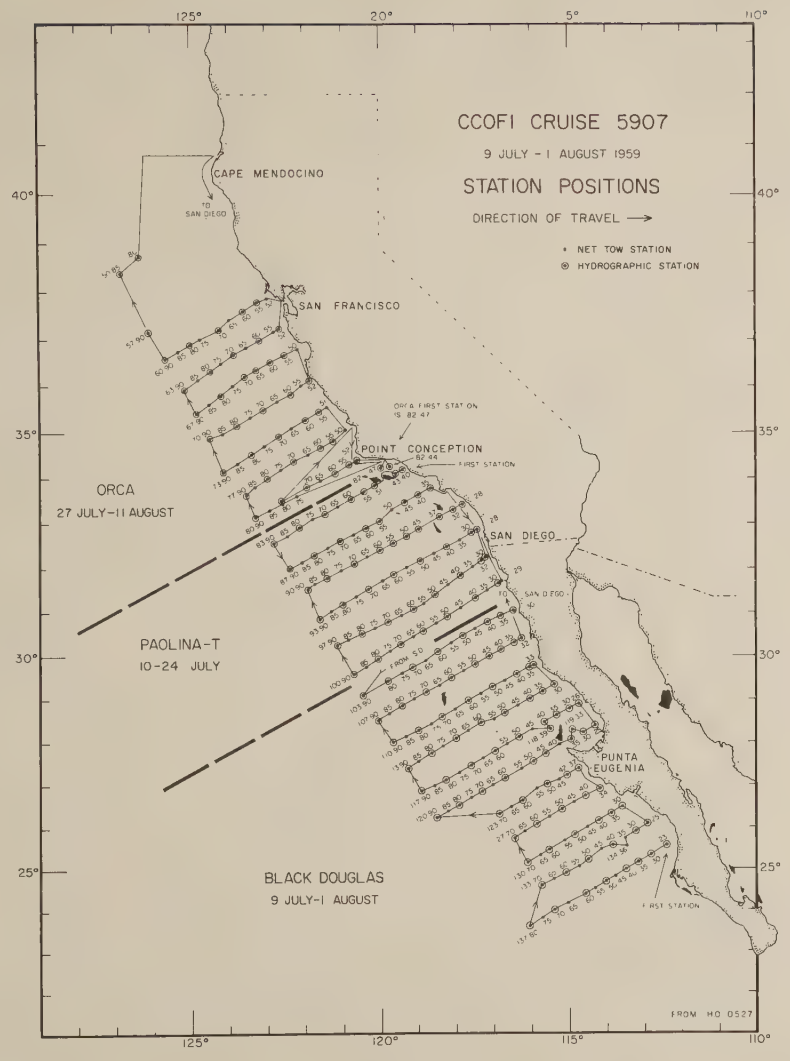

CHART 8. Station positions, CCOFI, Cruise 5907

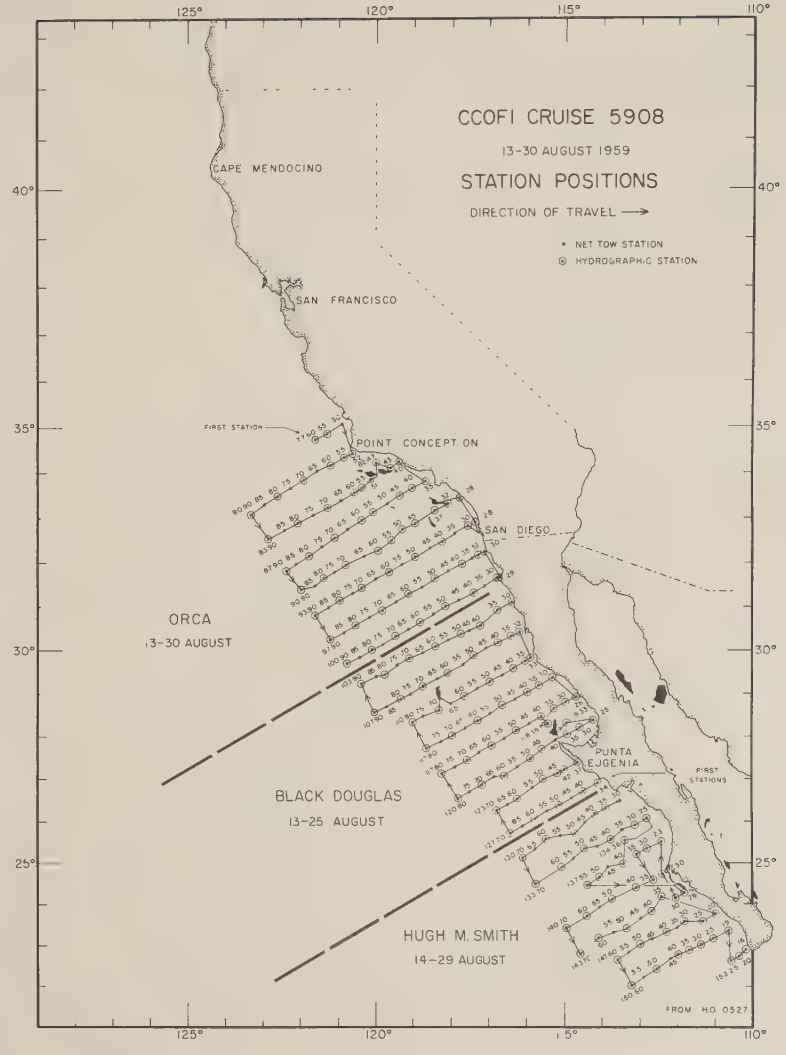

CHART 9. Station positions, CCOFI, Cruise 5908

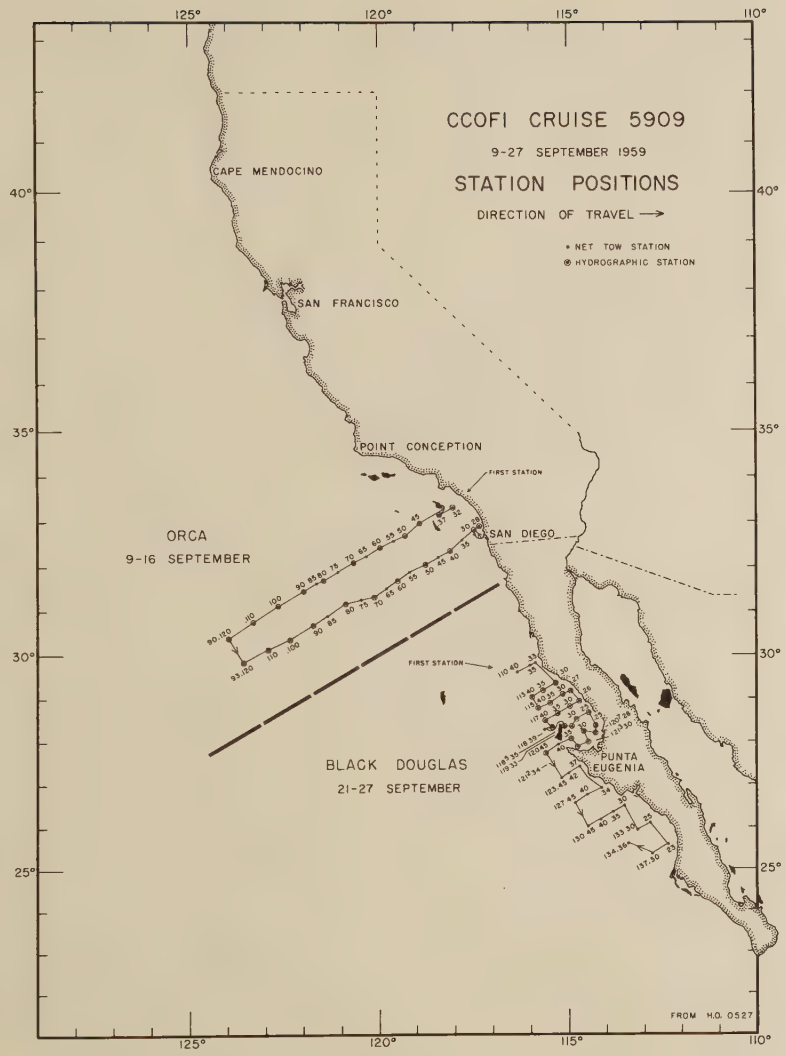

CHART 10. Station positions, CCOFI, Cruise 5909

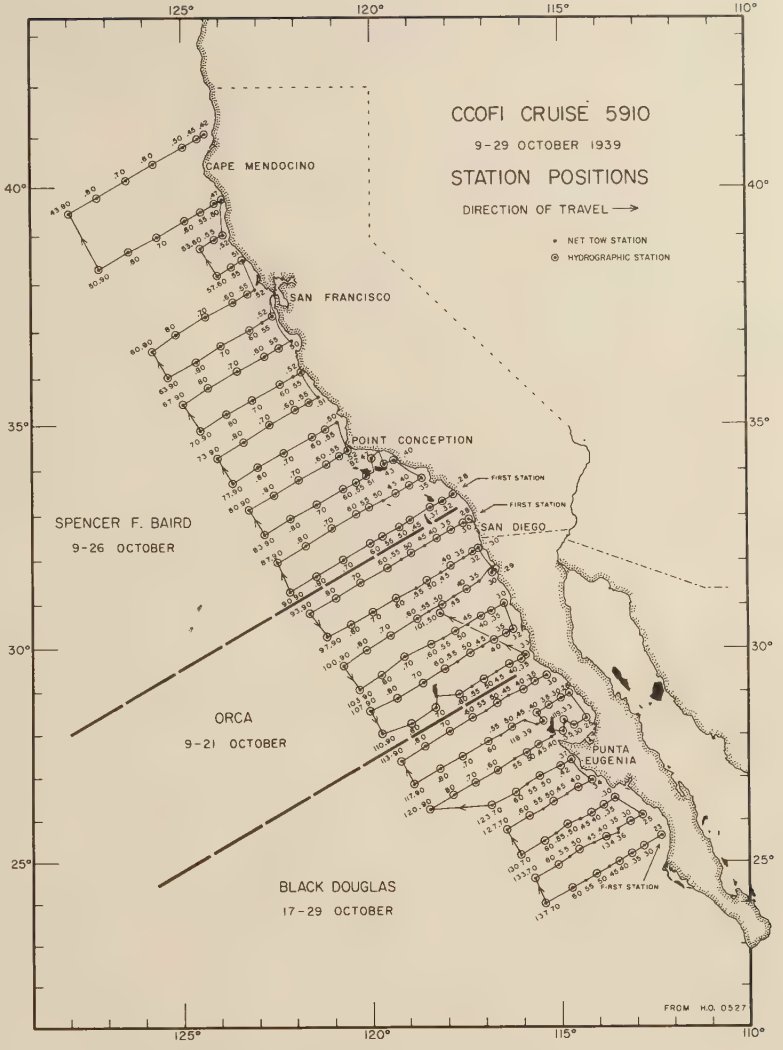

CHART 11. Station positions, CCOFI, Cruise 5910

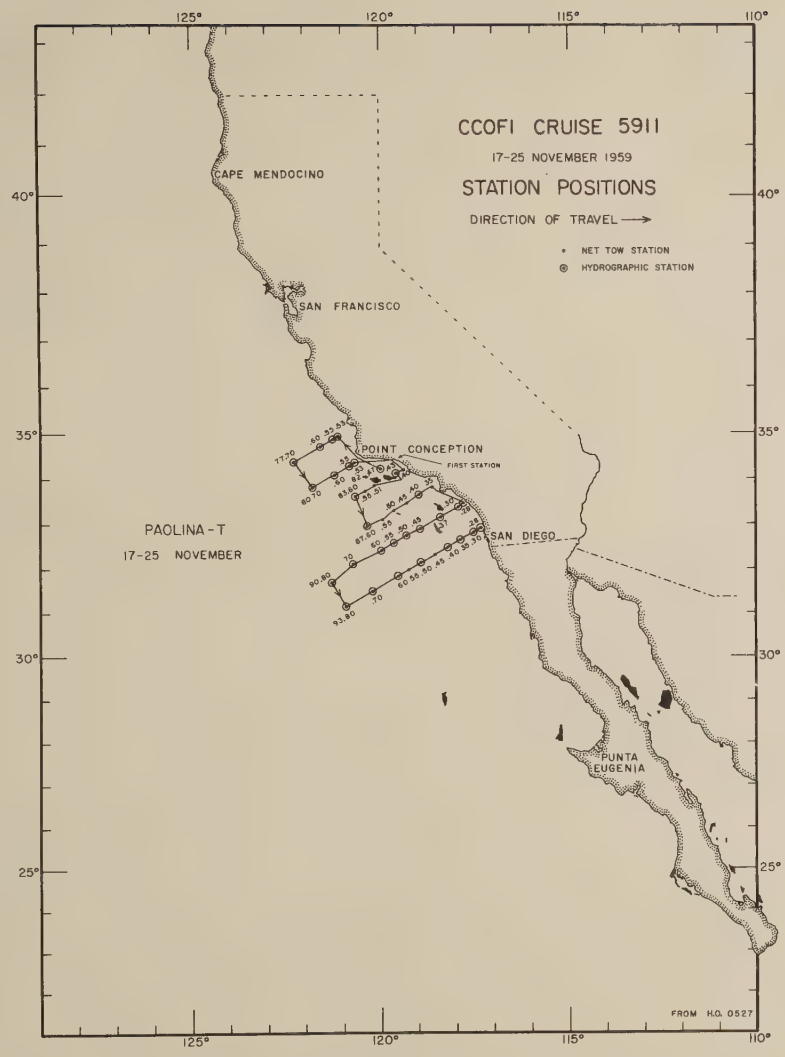

CHART 12. Station positions, CCOFI, Cruise 5911

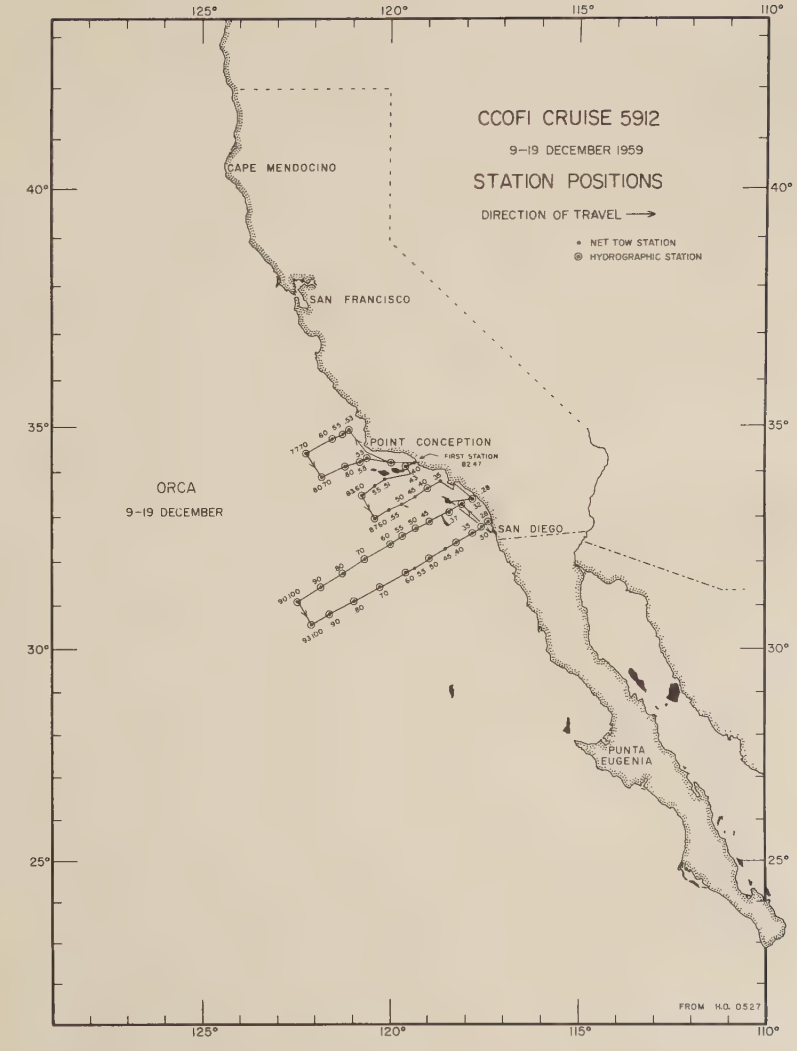

CHART 13. Station positions, CCOFI, Cruise 5912

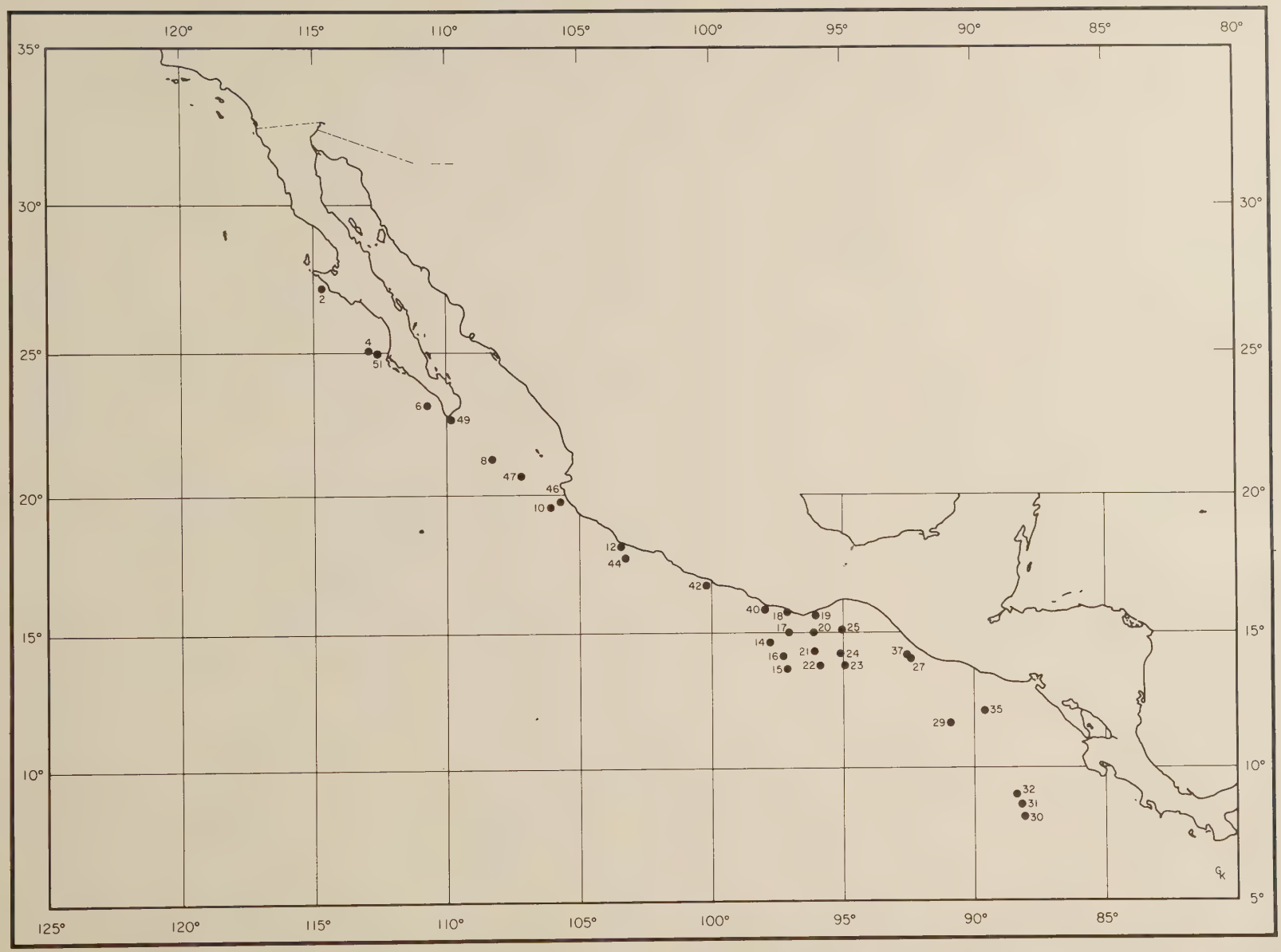

CHART 14. Station positions, Scripps Institution of Oceanography, RV Stranger on Cruise TO-59-1

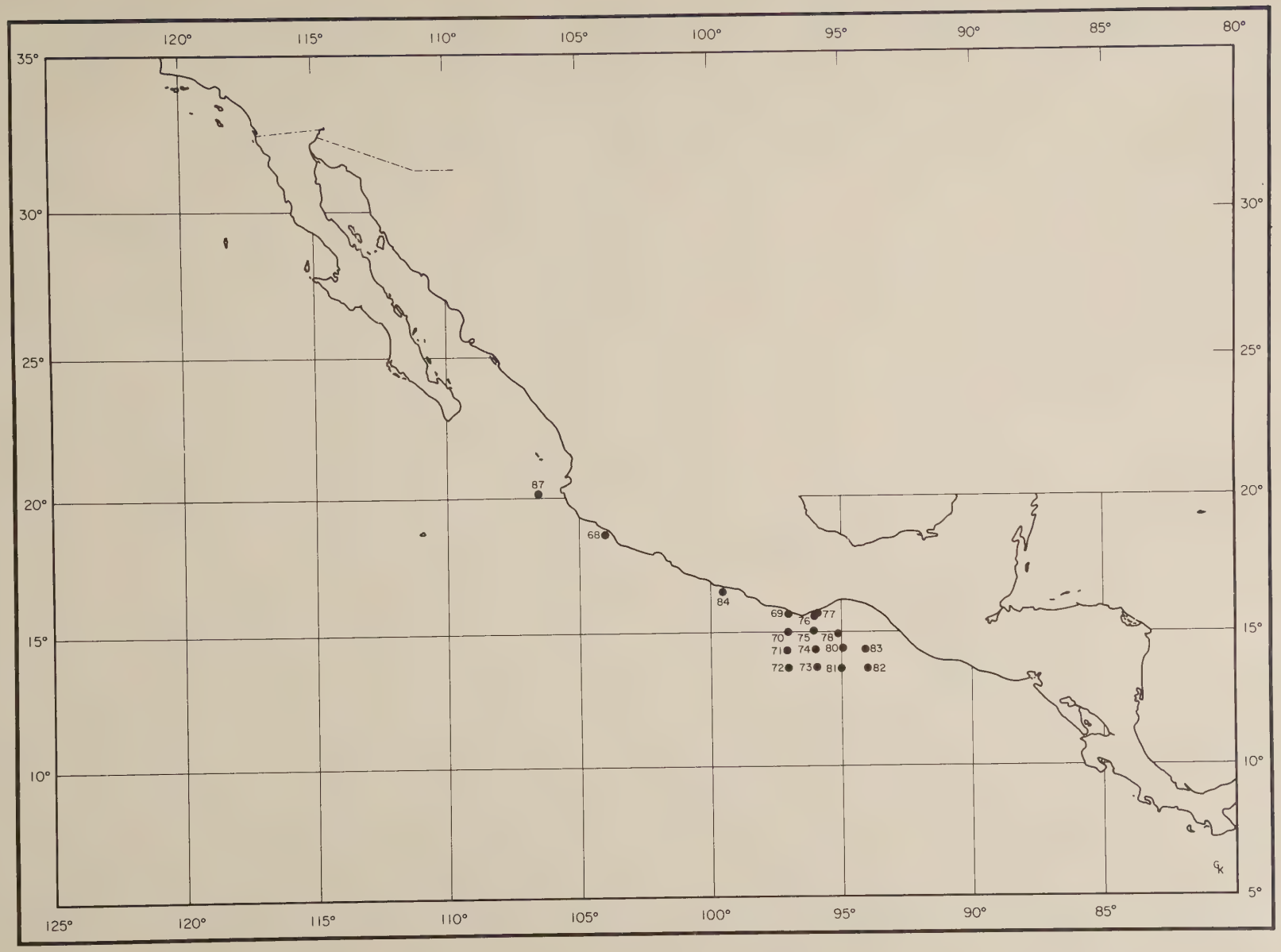

CHART 15. Station positions, Scripps Institution of Oceanography, RV Hugh M. Smith on Cruise TO-59-2

CHART 16. Station positions, Scripps Institution of Oceanography, RV Spencer F. Baird on Expedition Vermilion Sea

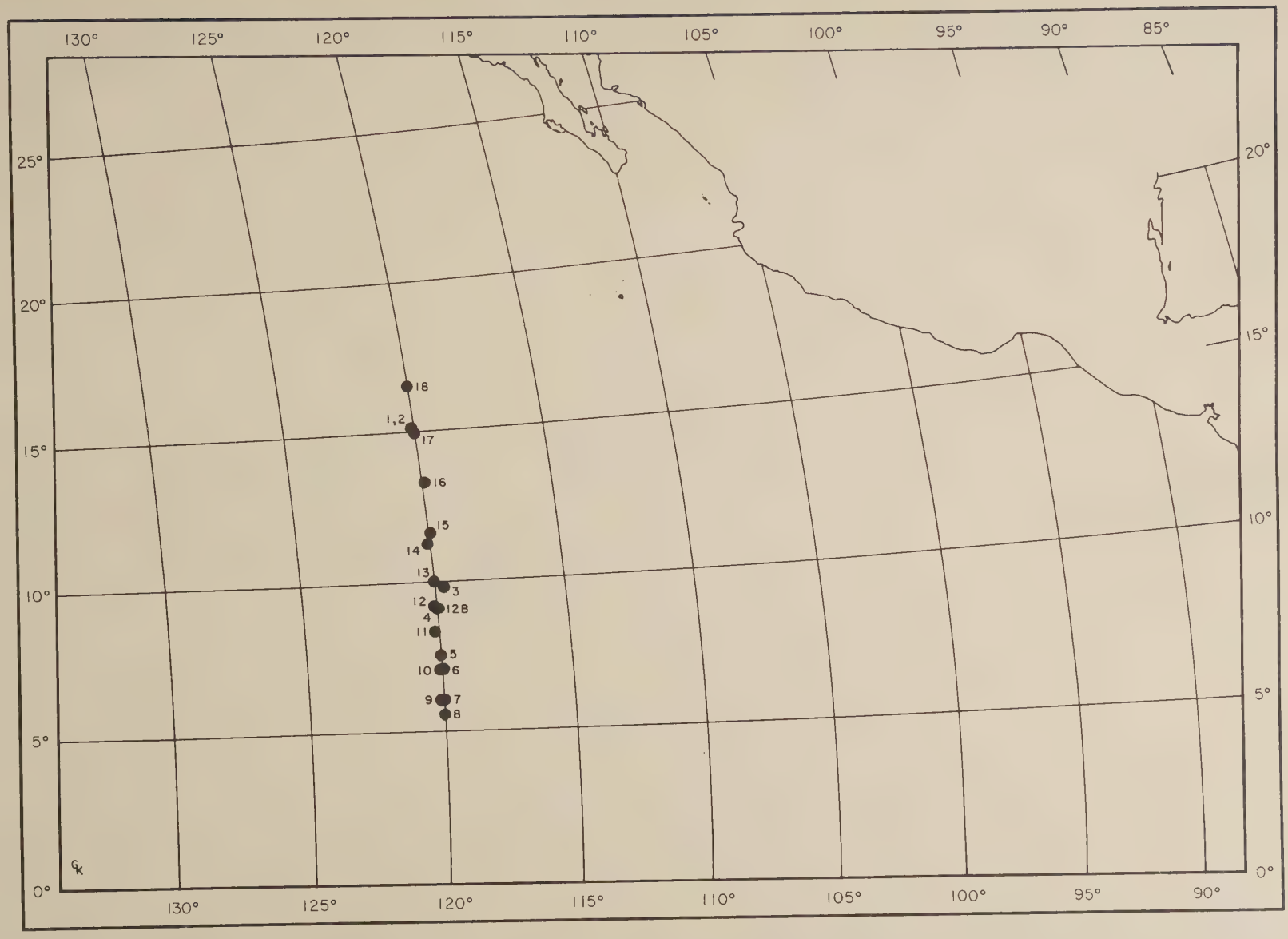

CHART 17. Station positions, Scripps Institution of Oceanography for International Geophysical Year, RV Horizon on Expedition Dorado

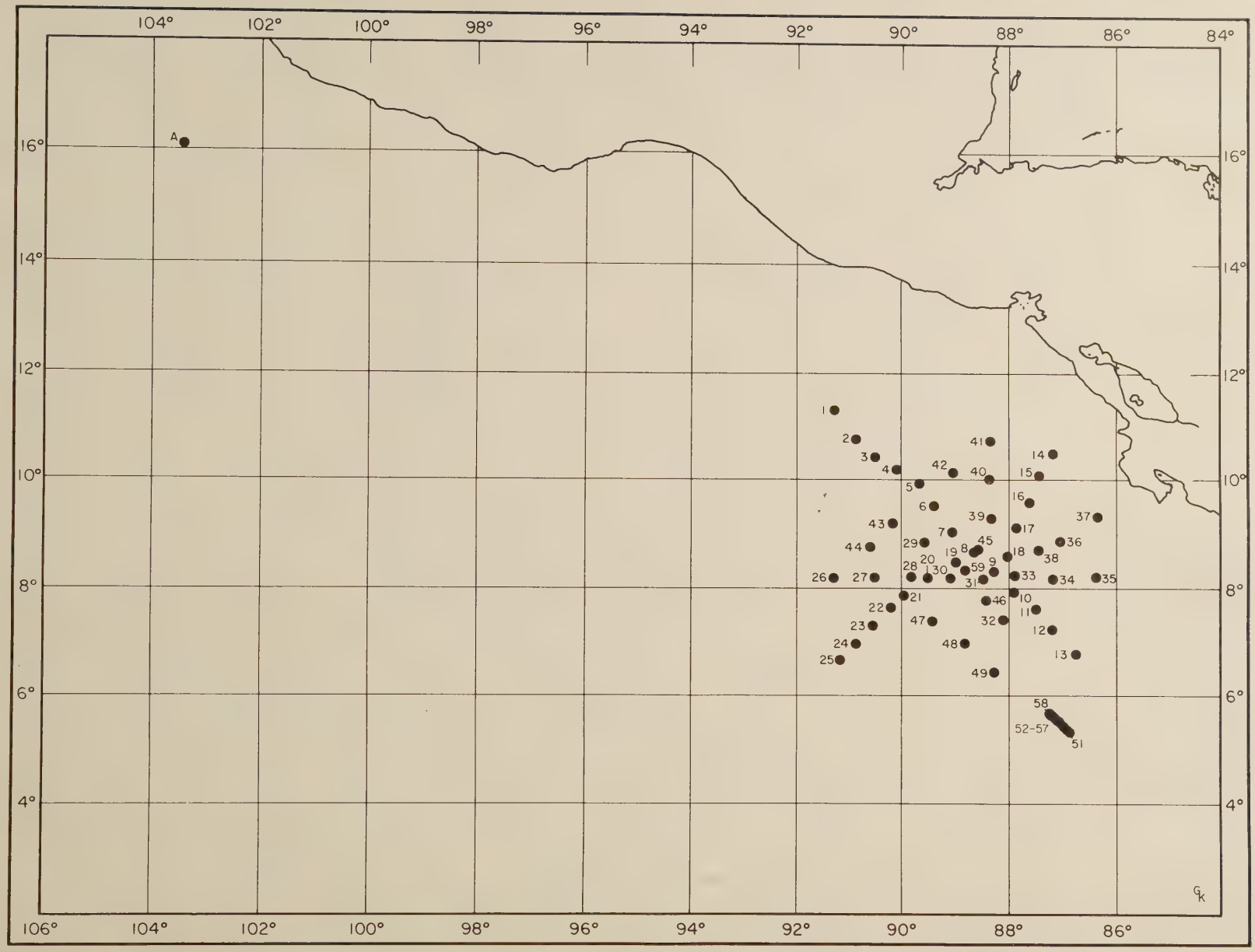

CHART 18. Station positions, Inter-American Tropical Tuna Commission and Scripps Institution of Oceanography, RV Spencer F. Baird on Cruise Costa Rica Dome

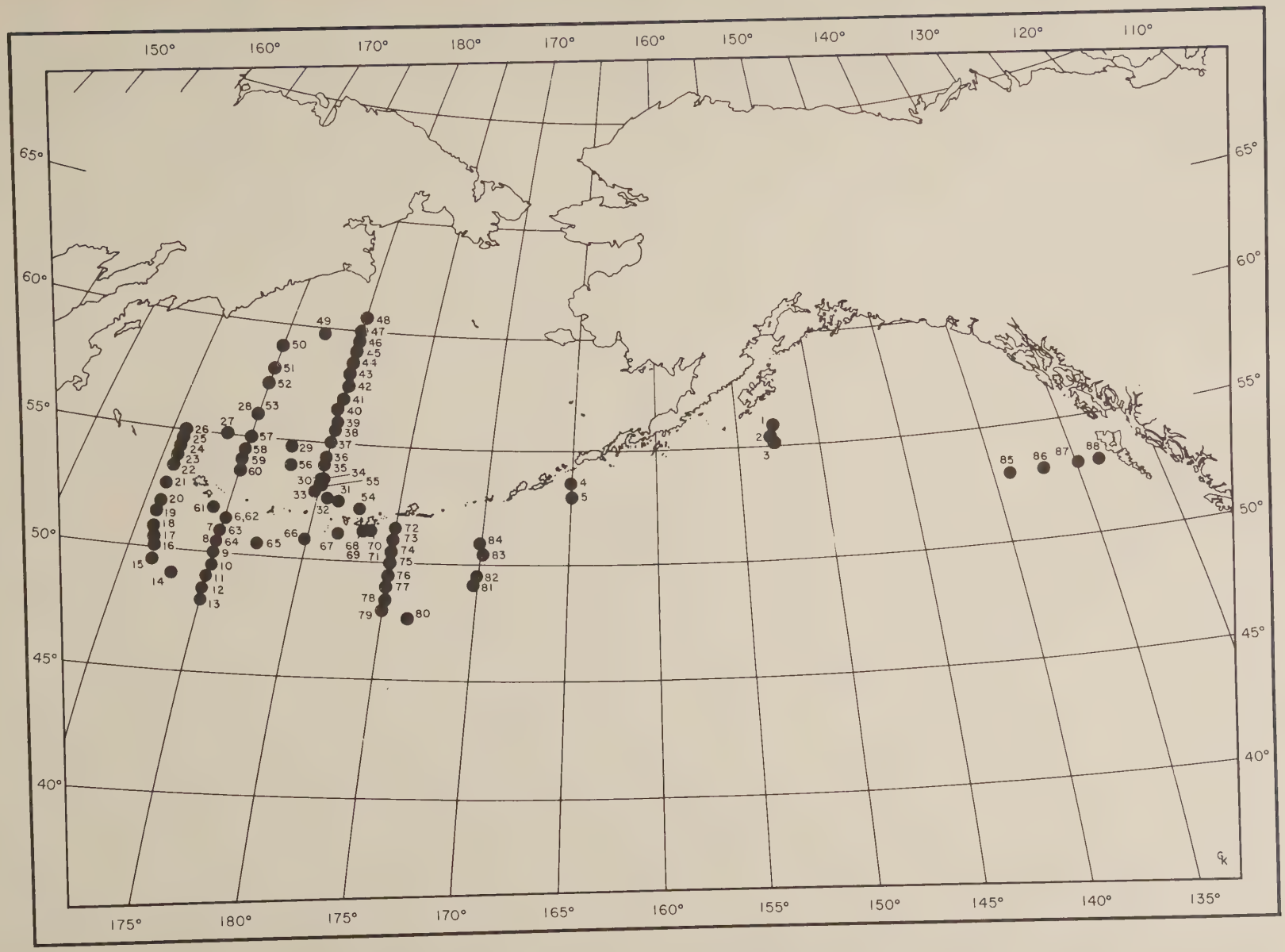

CHART 19. Station positions, Bureau of Commercial Fisheries, Seattle, Cruise Ocean-1 of MV Pioneer

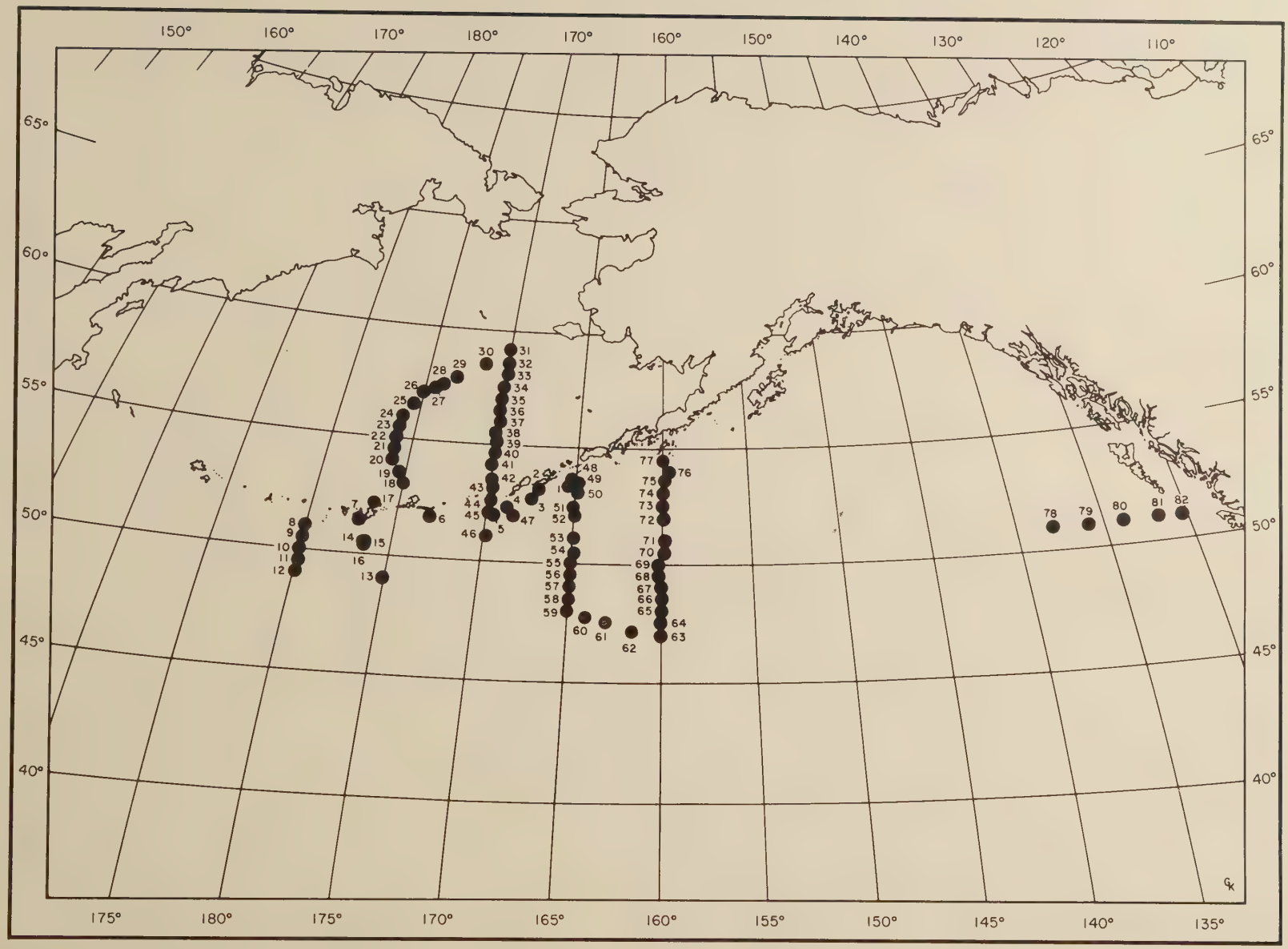

CHART 20. Station positions, Bureau of Commercial Fisheries, Seattle, Cruise Ocean-2 of MV Tordenskjold

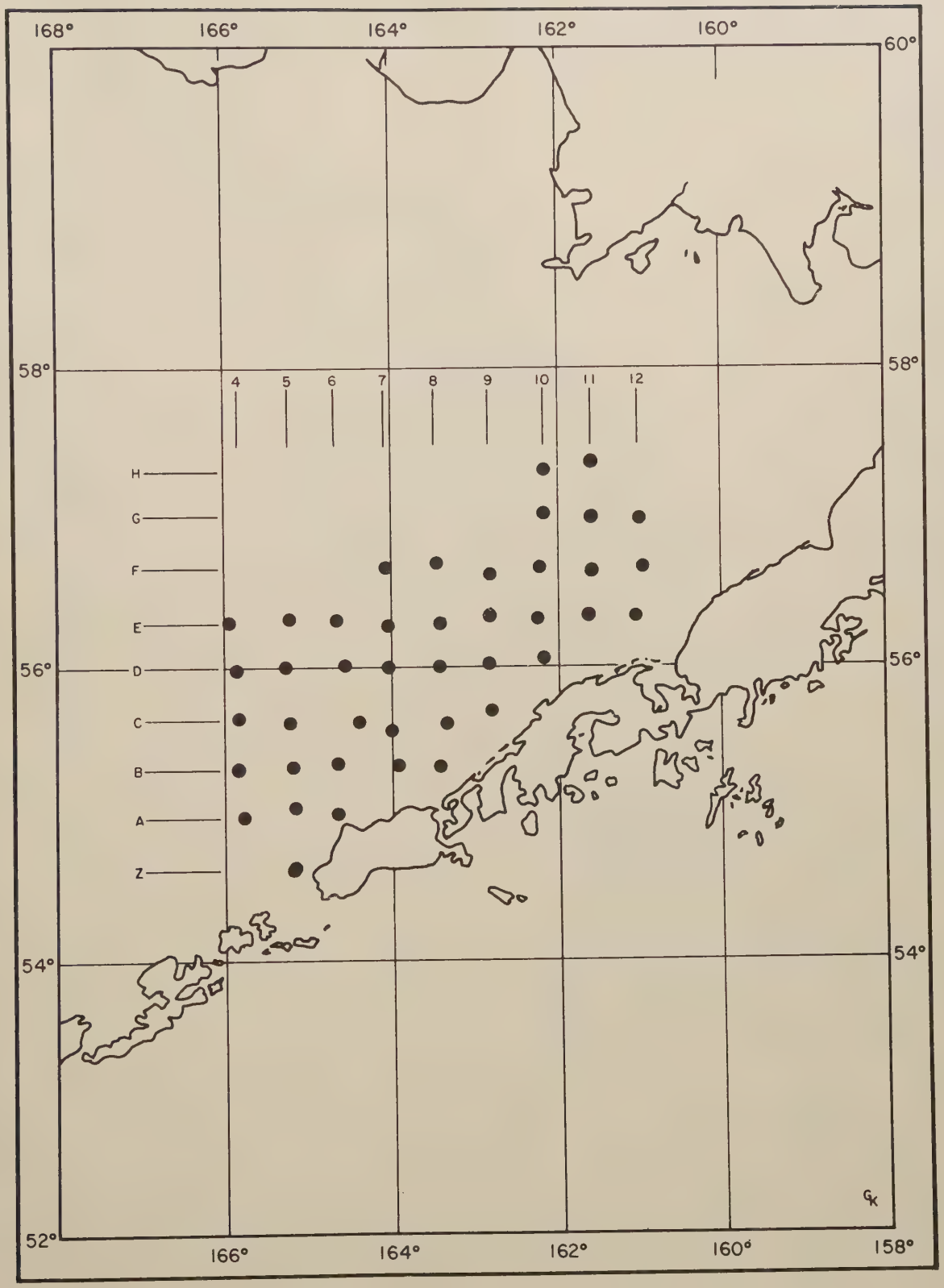

CHART 21. Station positions, Bureau of Commercial Fisheries, Seattle, King Crab Investigations, MV Tordenskjold

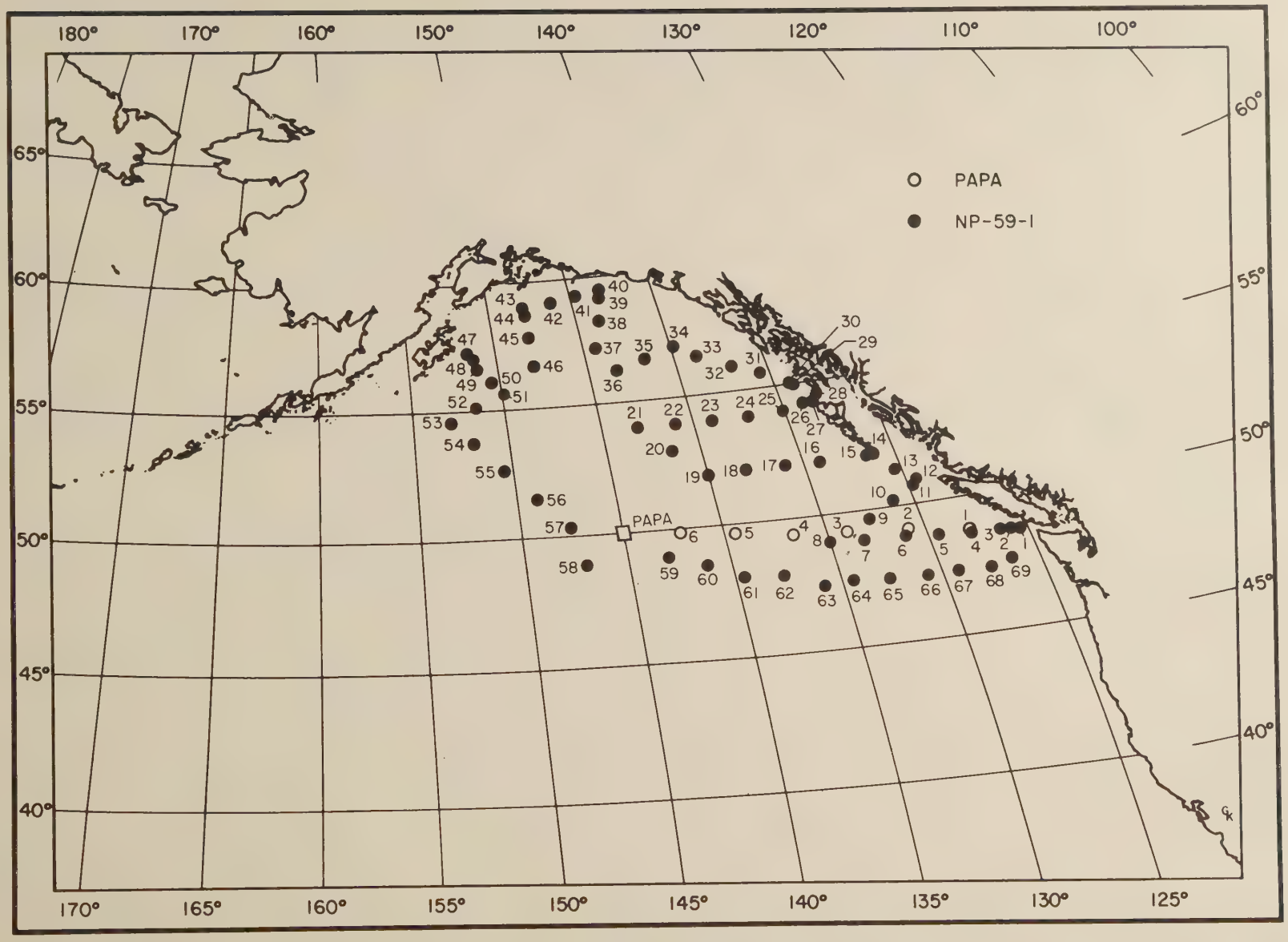

CHART 22. Station positions, Pacific Oceanographic Group, Cruises P-59-1 through P-59-5 of CGS St. Catharines (Ocean Weather Station PAPA) and NP-59-1 of CNAV Oshawa

CHART 23. Station positions, Pacific Oceanographic Group, Cruise CS-59-1 of CNAV Oshawa

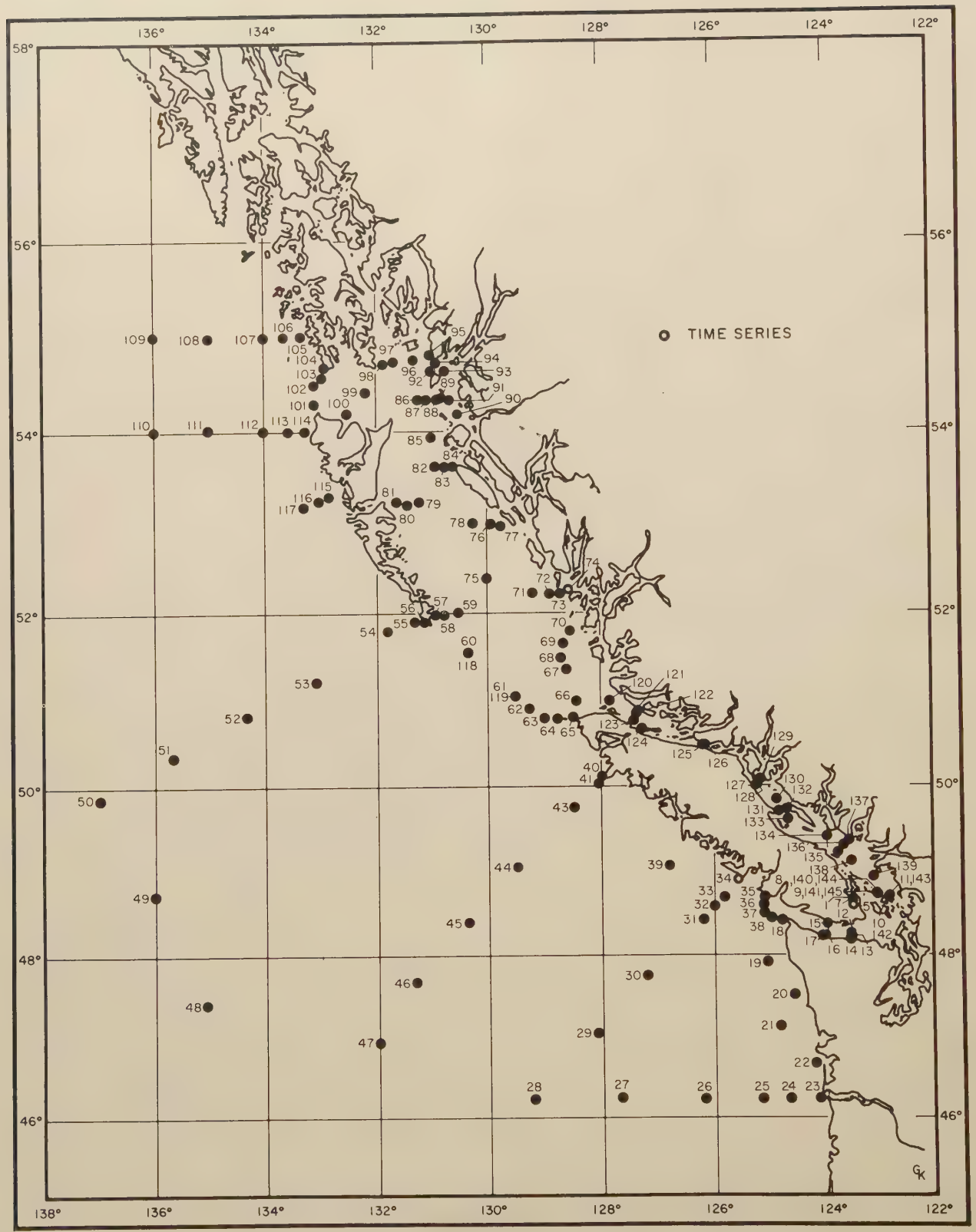

CHART 24. Station positions, Pacific Oceanographic Group, Cruise CS-59-2 of CNAV Oshawa

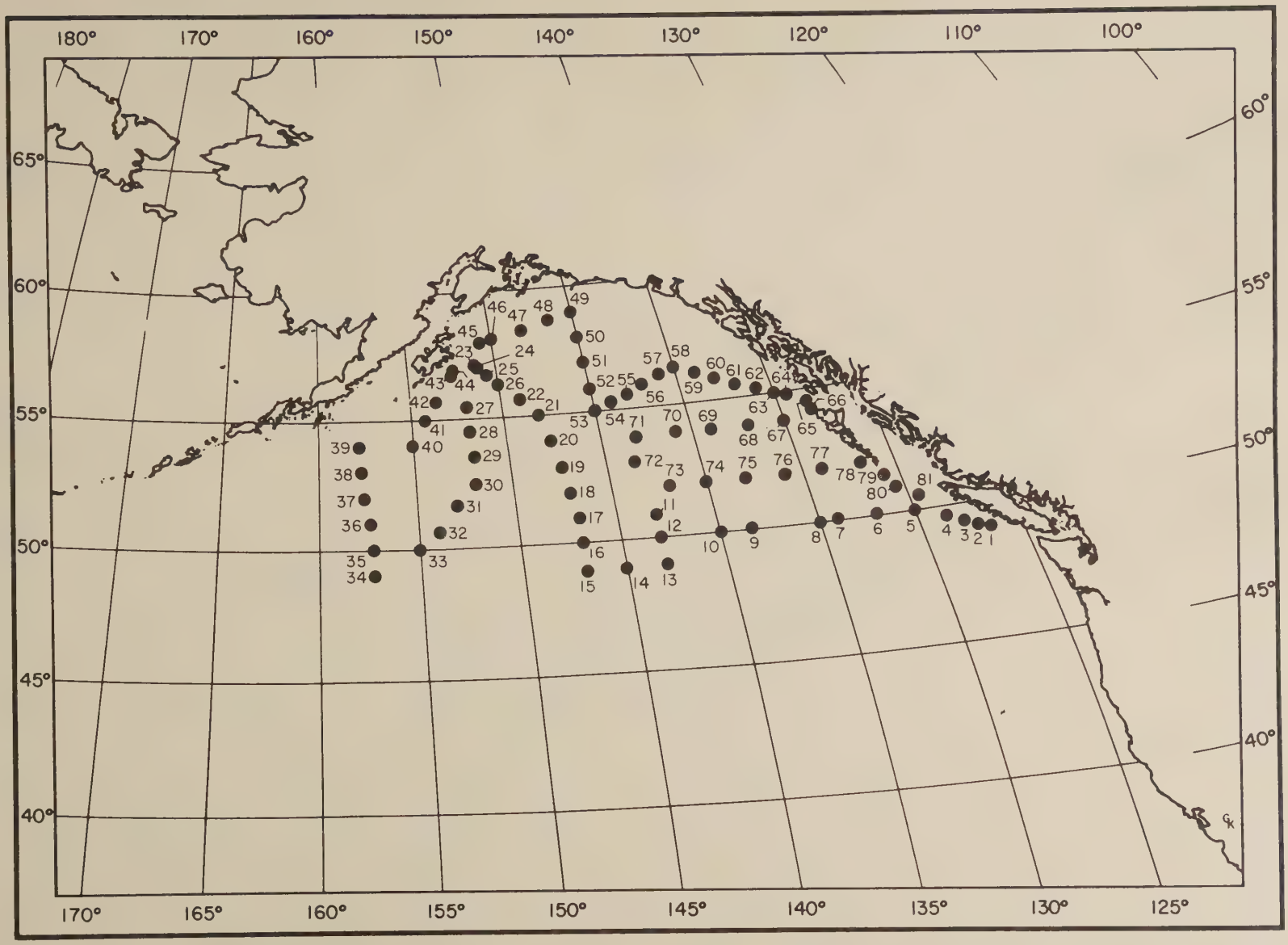

CHART 25. Station positions, Pacific Oceanographic Group, Cruise NP-59-2 of CNAV Oshawa

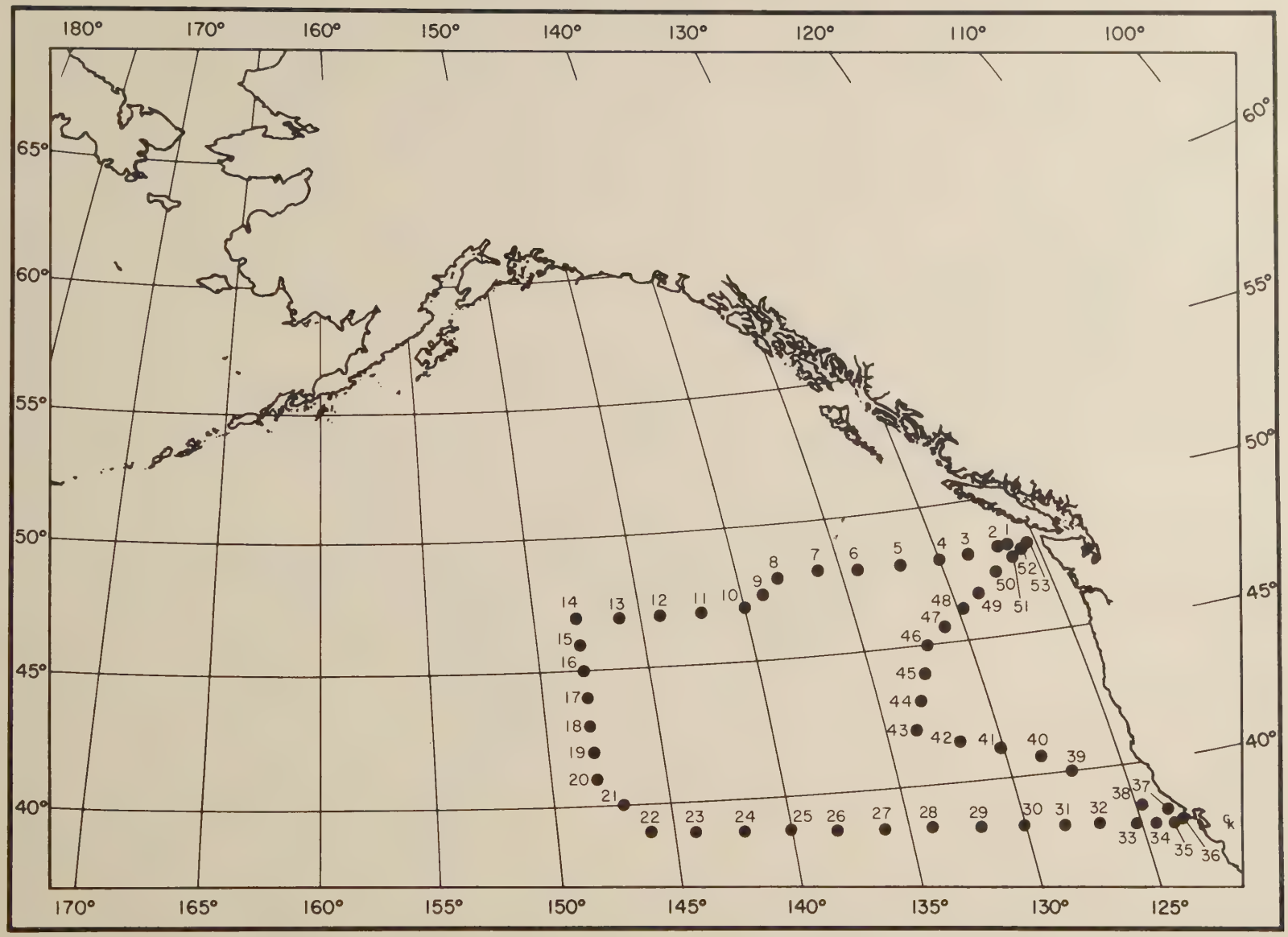

CHART 26. Station positions, Pacific Oceanographic Group, Cruise NP-59-3 of CNAV Whitethroat

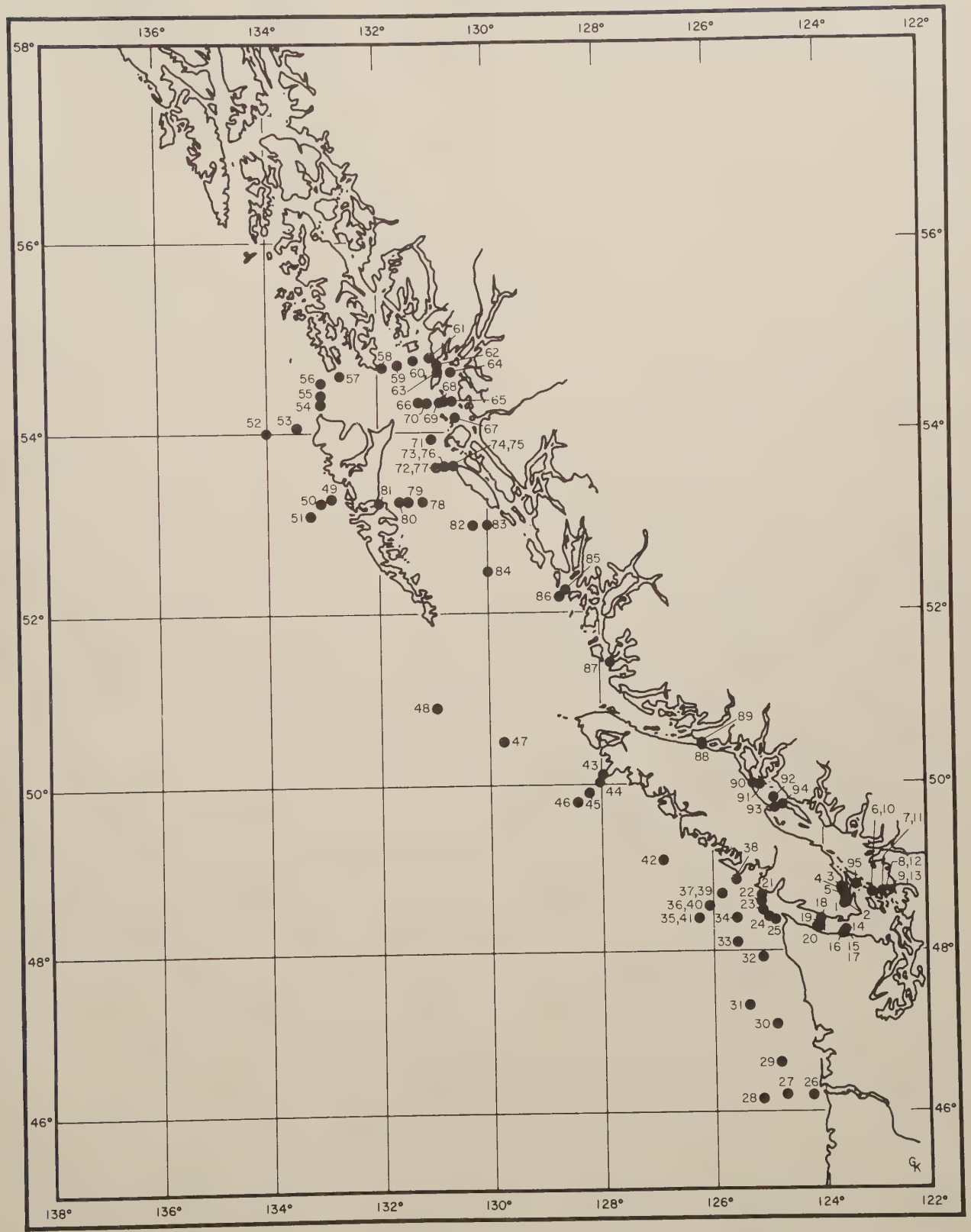

CHART 27. Station positions, Pacific Oceanographic Group, Cruise CS-59-3 of CNAV Oshawa

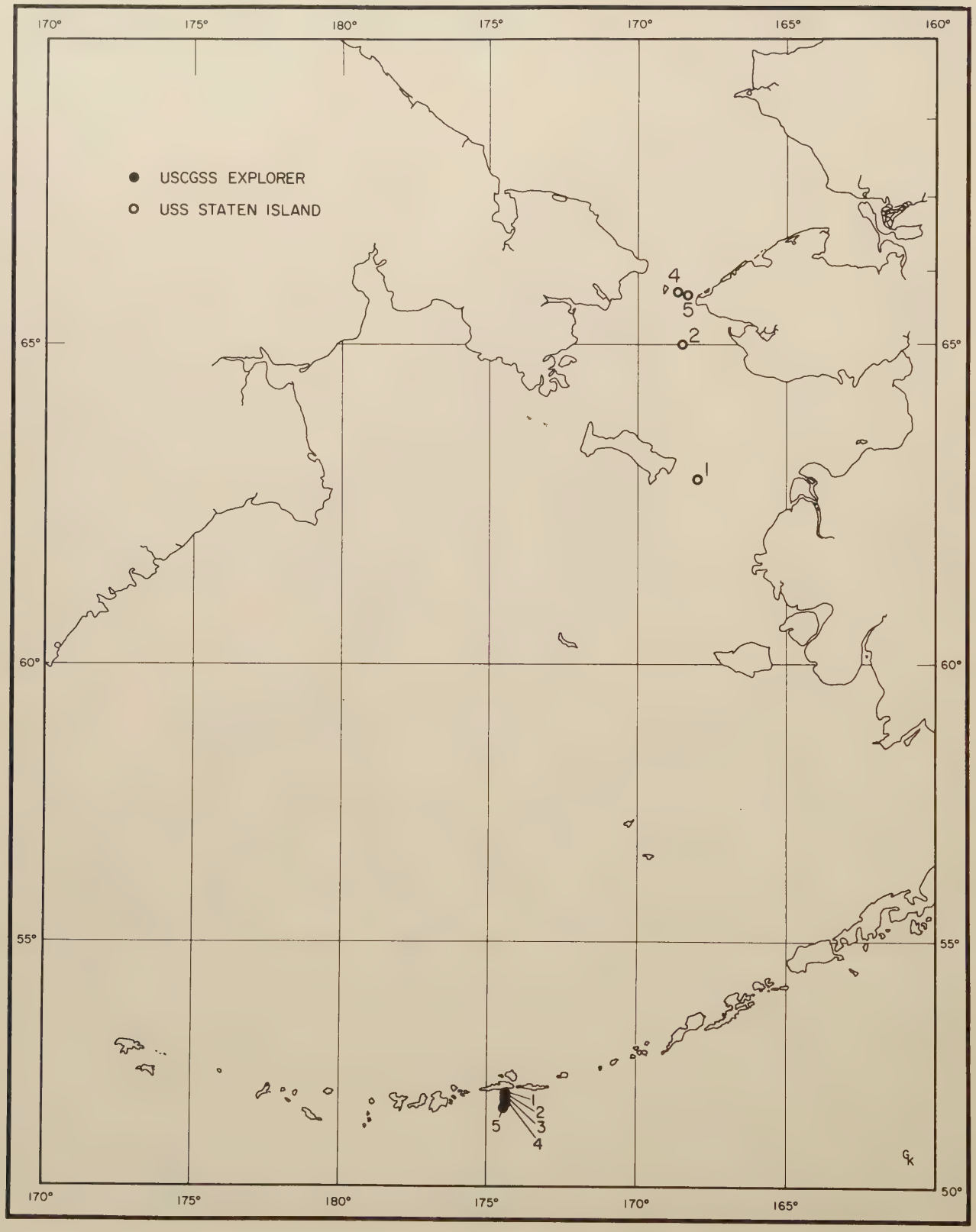

CHART 28. Station positions, U. S. Coast and Geodetic Survey, USCGSS Explorer, and U. S. Naval Oceanographic Office, USS Staten Island

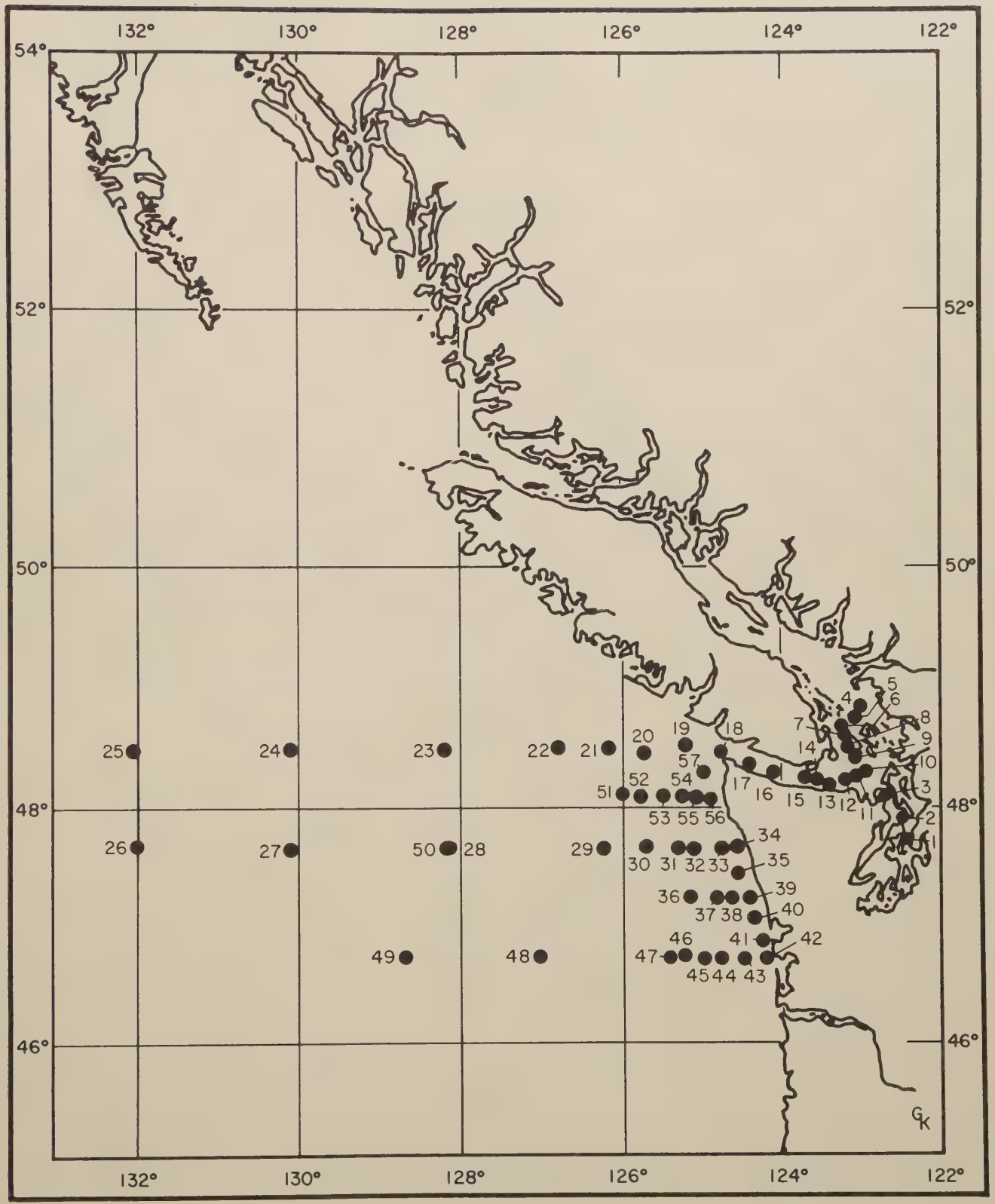

CHART 29. Station positions, University of Washington, Cruise 234 of RV Brown Bear

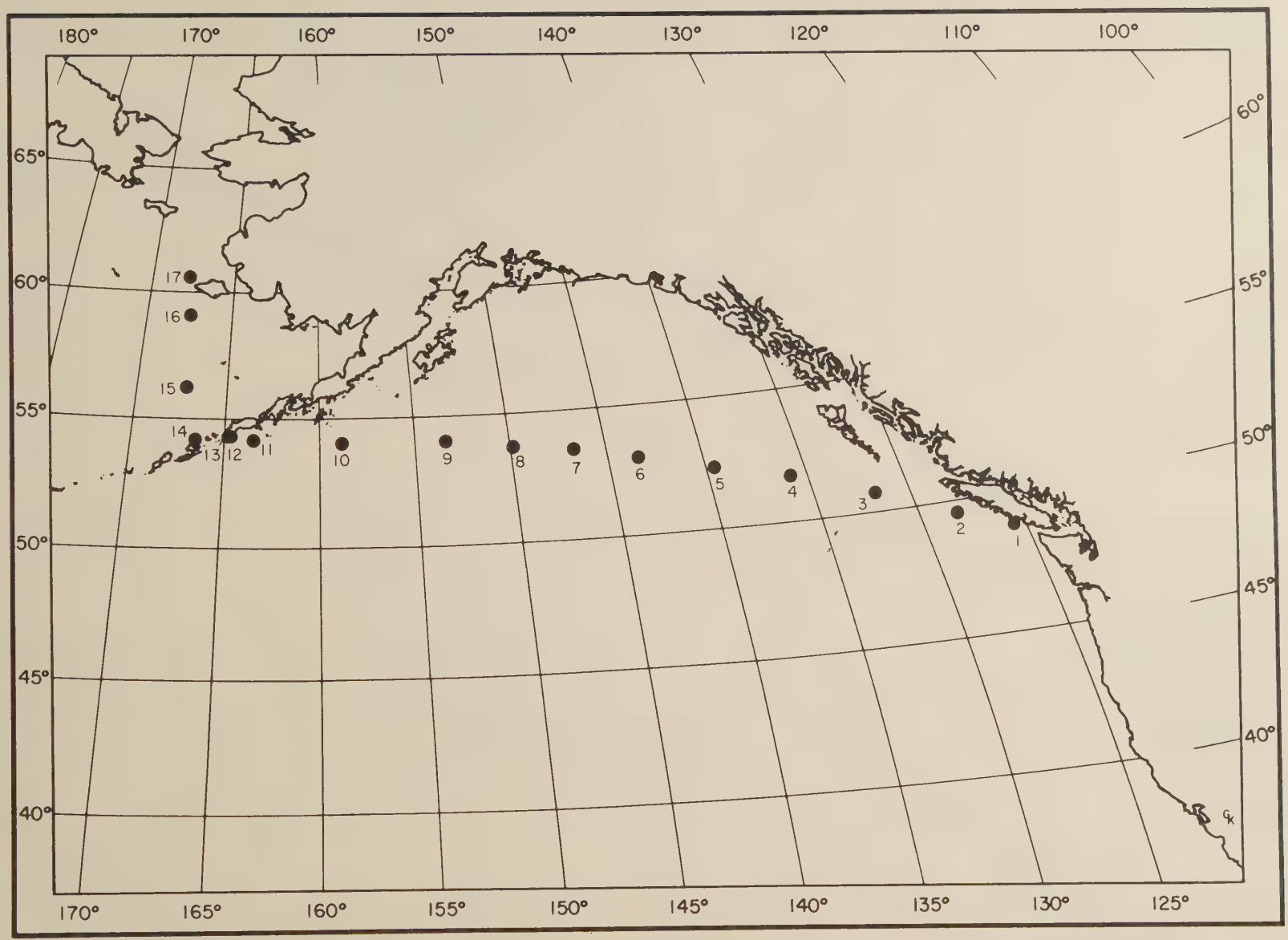

CHART 30. Station positions, University of Washington, Cruise 235 of RV Brown Bear

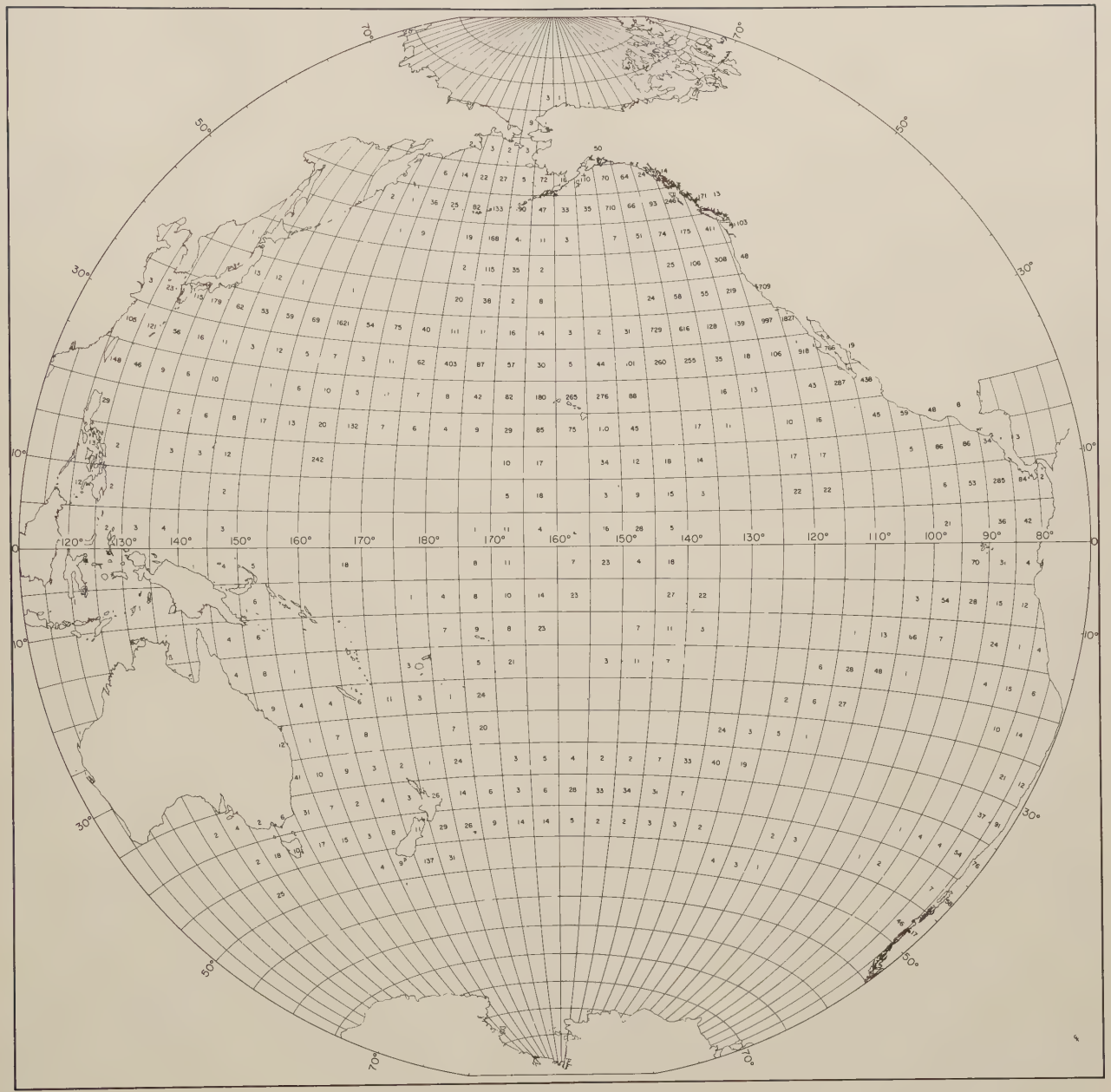

CHART 31. Bathythermograph observations, North and South Pacific, 1959; total, 23,457

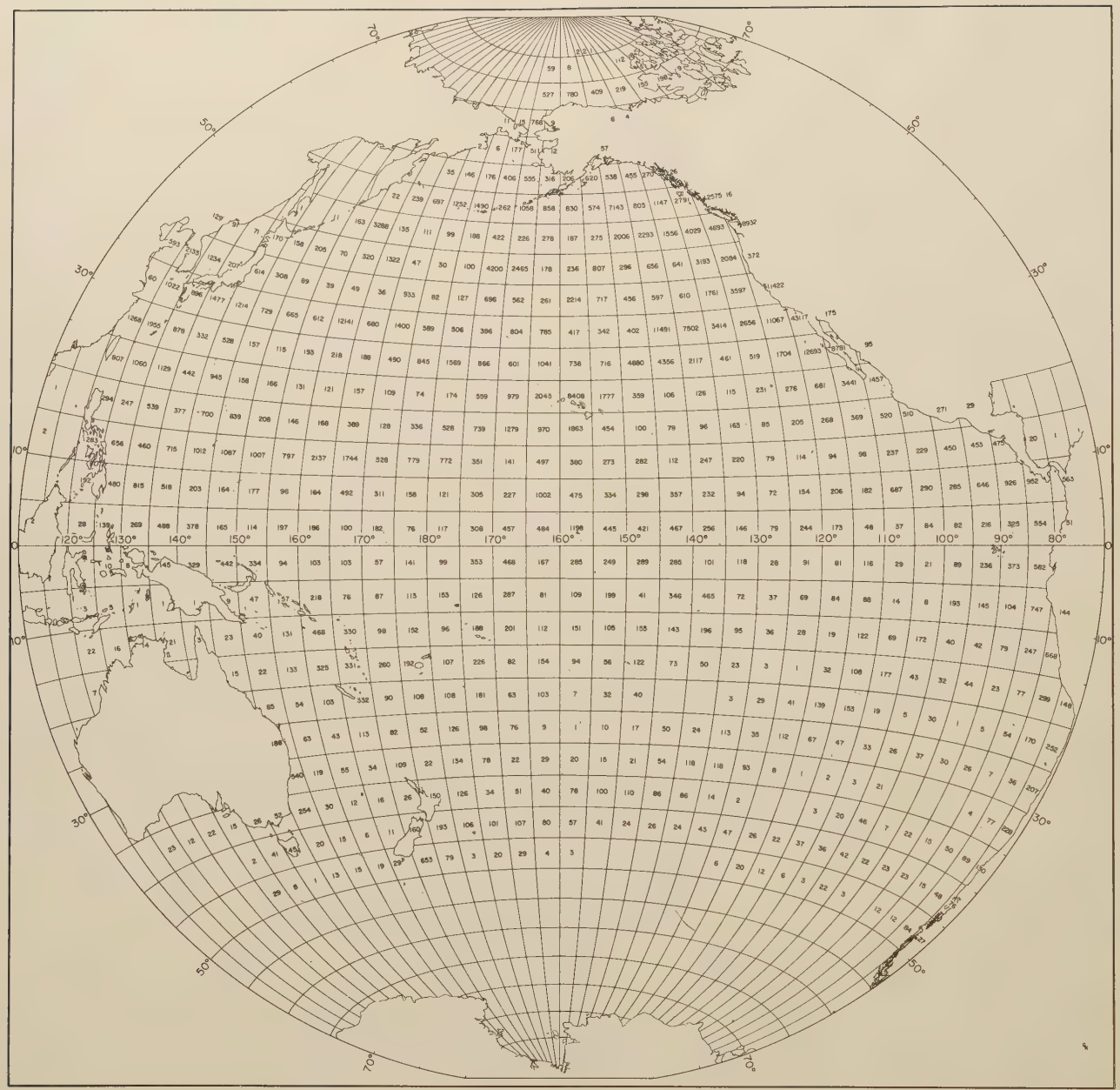

CHART 32. Bathythermograph observations, North and South Pacific, 1941–1959; total, 356,604

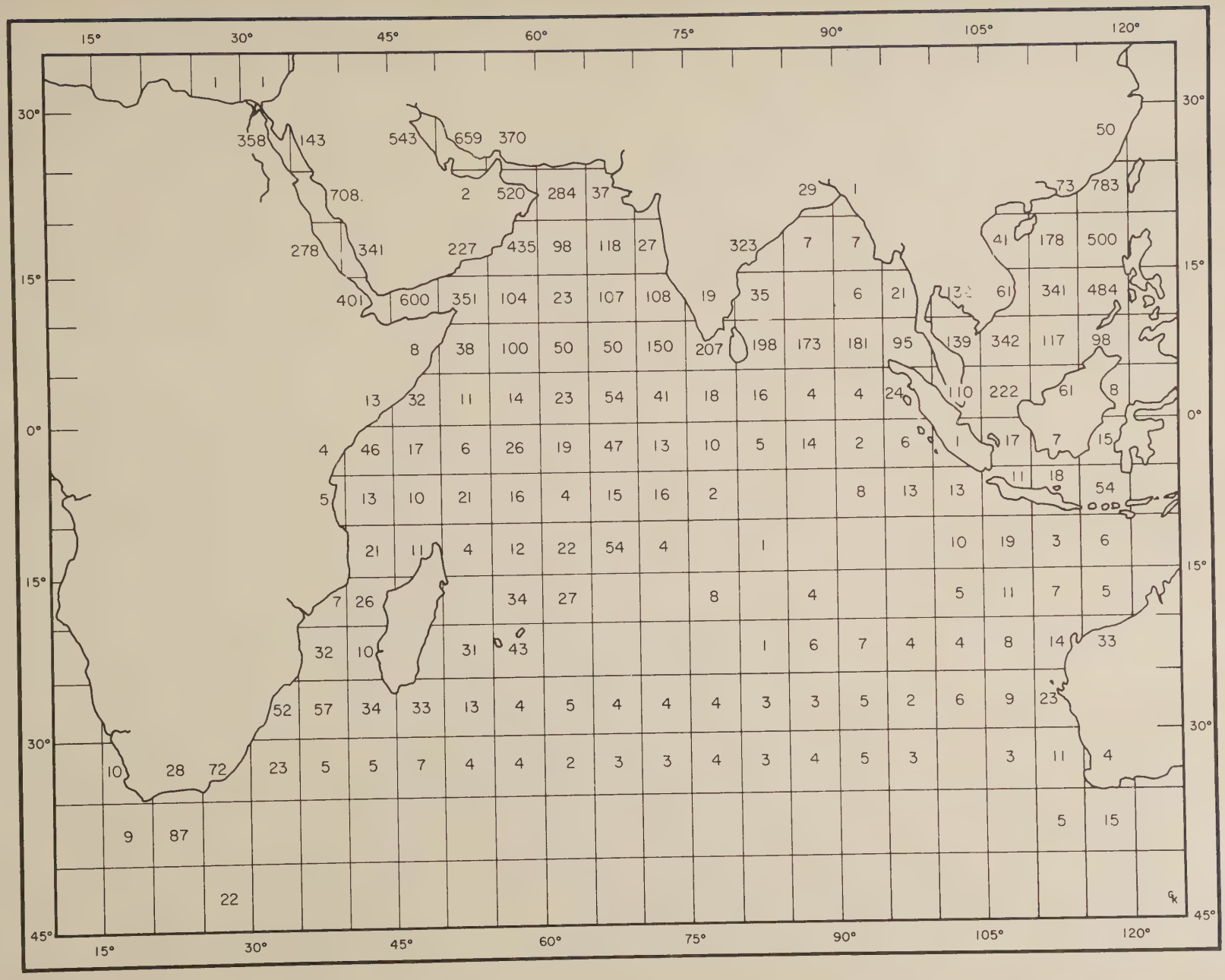

CHART 33. Bathythermograph observations, Indian Ocean, 1941–1959; 14,141

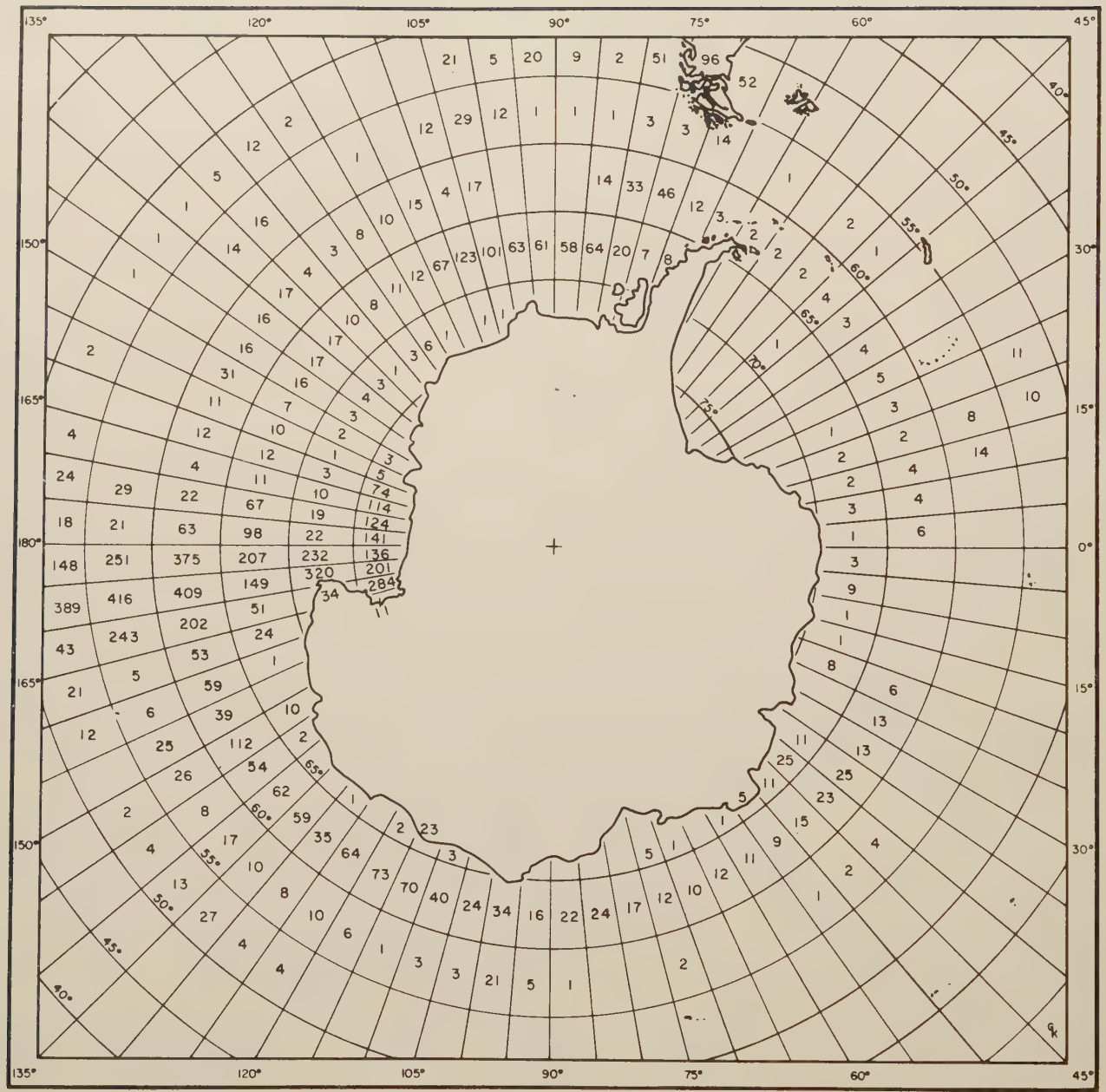

CHART 34. Bathythermograph observations, Antarctic Ocean, 1941–1959; total, 7,848

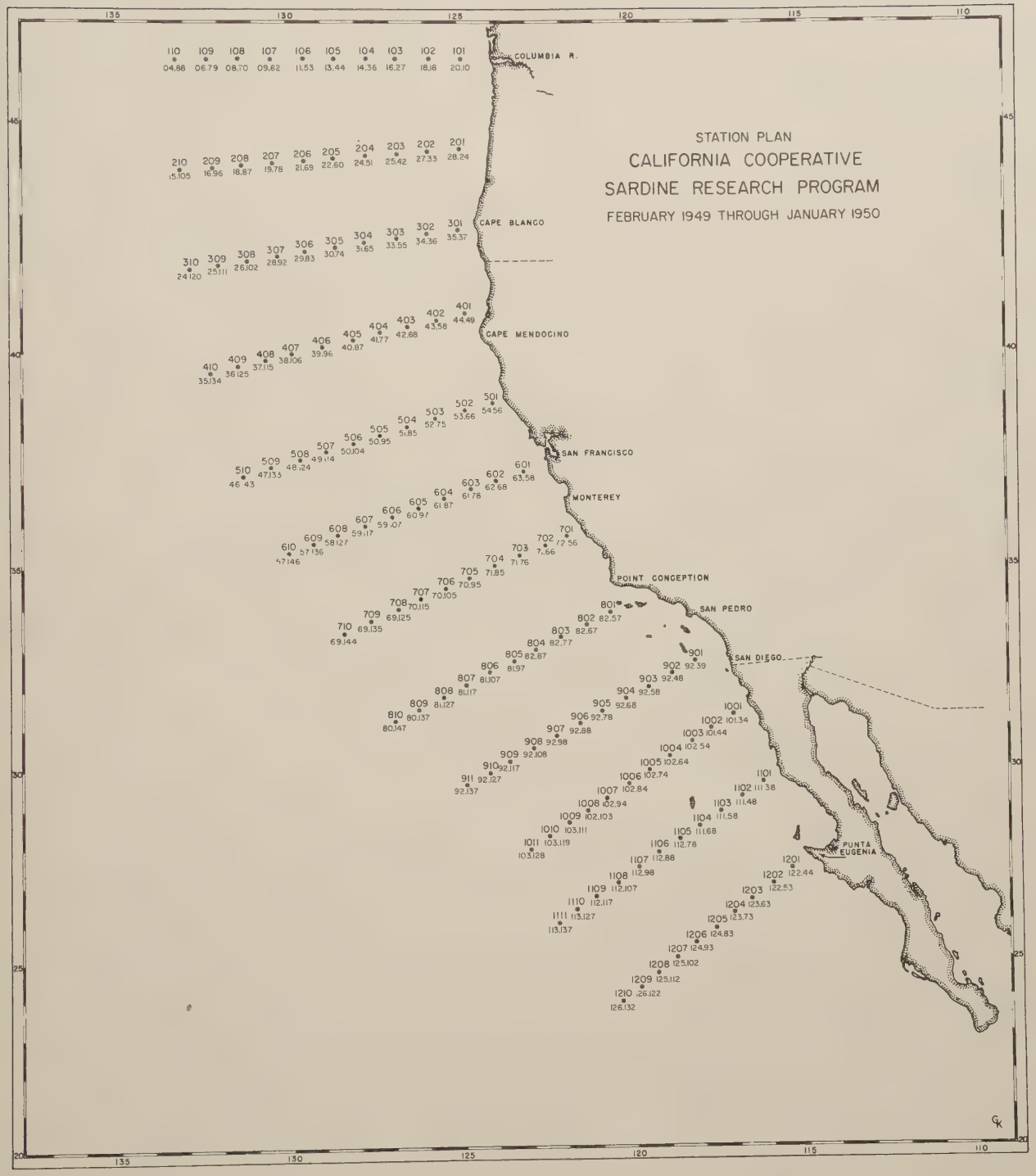

CHART 35. Station plan of the California Cooperative Oceanic Fisheries Investigations (formerly California Cooperative Sardine Research Program) from February, 1949, to January, 1950, inclusive, with equivalent numbers according to present station numbering system

Explanation of Tables

SIDE RUNNING HEADS

Cruise-identifying information is shown in the margin near the top of the page. The first line is an abbreviation of the name of the organization responsible for the data. The second and third lines give the cruise identification. In the case of data collected in the California Cooperative Oceanic Fisheries Investigations research program, for example, CCOFI 5901 signifies the January cruise of 1959.

Individual station numbers are given in the margin opposite the station data. The letter "D" preceding the number indicates a drogue station; the letter "K" inserted in the station number denotes an anchor station. Raised numbers for the CCOFI stations indicate a position between lines or between stations of the standard station pattern. Station locations are shown in the appropriate position charts.

HEADINGS OF GROUPS OF COLUMNS

OBSERVED: Corrected data at accepted depths of observation.

INTERPOLATED: Data at standard depths, interpolated from smooth distribution curves or by machine-interpolation programs (see Notes on Particular Cruises). The standard depths are those selected by the agencies.

COMPUTED: The results of computations based, in general, on interpolated values.

COLUMN HEADINGS

Z — Depth in meters at which observation was made or an interpolated value obtained.

T — Temperature of water in degrees Celsius at observed or interpolated depths.

S — Salinity of water in grams per kilogram (‰) at observed or interpolated depths.

O_2 — Concentration of dissolved oxygen in milliliters per liter (ml/L) at observed or interpolated depths.

PO_4-P — Concentration of dissolved inorganic phosphorus in microgram atoms per liter (μg at/L) or micromoles per liter at observed or interpolated depths.

SiO_3-Si — Concentration of dissolved silicon in microgram atoms per liter (μg at/L) or micromoles per liter at observed or interpolated depths.

NO_2-N — Concentration of dissolved inorganic nitrite nitrogen in microgram atoms per liter (μg at/L) or micromoles per liter at observed depths.

NO_3-N — Concentration of dissolved inorganic nitrate nitrogen in microgram atoms per liter (μg at/L) or micromoles per liter at observed depths.

σ_t — Sigma-t in grams per liter (g/L) at observed or interpolated depths. Sigma-t can be defined

$$\sigma_t = 1000\ (\rho_{ST0} - 1)$$

where ρ_{ST0} is the density, in grams per milliliter, of water of salinity, S, temperature, T, and at standard atmospheric pressure. Density is expressed in these units to be consistent with the tables used for the computations.

δ — Specific volume anomaly, in centiliters per ton (cl/ton), although most of the column headings state $10^{-5}cm^3/g$. The difference between the two units is negligible in these data (Pollak, 1961), but the correct units are centiliters per ton (or $10^{-5}ml/g$). Specific volume anomaly is defined as the difference between the specific volume of the water at a specified depth and the specific volume of a standard water with salinity of 35‰ and temperature of 0°C at the same depth. Specific volume anomaly is expressed in these units to be consistent with the tables used for the computations.

δ_T — Thermosteric anomaly, the pressure-independent part of the specific volume anomaly. Specific volume anomaly is defined

$$\delta = \alpha_{stp} - \alpha_{35,0,p}$$

and is computed as

$$\delta = \Delta_{st} + \delta_{sp} + \delta_{tp}$$

The quantity Δ_{st} has been discussed by Sverdrup, Johnson and Fleming (1946, p. 58) and approximately represents potential specific volume anomaly. It is used here with the name (thermosteric anomaly), symbol (δ_T) and unit (centiliter per ton) suggested by Montgomery and Wooster (1954) although most of the column headings state $10^{-5}cm^3/g$. The difference between the two units is negligible in these data (Pollak, 1961), but the correct units are centiliters per ton.

ΔD Geopotential anomaly, in dynamic meters (dynamic height), of the layer of water between the surface and the designated standard pressure. Geopotential anomaly is the difference between the geopotential thickness of the observed layer and the geopotential thickness of a layer bounded by the same pressures but having standard temperature, 0°C, and salinity, 35‰. The tabulated anomaly is determined from an approximation of the integral

$$\Delta D = \int_0^{p_z} \delta \, dp$$

where p is pressure in decibars (assumed equal to depth in meters) and subscript z denotes the value at the bottom of the layer under consideration. Since geopotential thickness is the product of geometrical thickness and the acceleration of gravity, a dynamic meter is equal to 10^5 ergs per gram and is the change in geopotential over a vertical distance of approximately 1.02 meter.

$\Delta D'$ This quantity is calculated in a similar manner to ΔD (see definition) except that it does not include the pressure terms δ_{sp} and δ_{tp}. It is equal to

$$\Delta D' = \int_0^{p_z} \delta_T \, dp$$

SUPPLEMENTARY STATION INFORMATION

Supplementary information about each station is to be found just above the tabulated data. This information includes name of ship, data and time of observation, geographical location of station, depth of water, wind direction and force (usually Beaufort scale), a description of surface weather and sea state, and wire angle. When there is more than one cast on a station, messenger times and wire angles are given for the casts in the order of increasing depth.

NOTES ON THE TABULATION OF DATA

1. Observed temperatures obtained by thermograph, bucket thermometer or bathythermograph are reported only to tenths of a degree. Temperatures by reversing thermometer are reported to hundredths of a degree.

2. Observed salinities determined by the Knudsen method are reported to hundredths of a part per mille. Observed values determined by conductivity bridge are reported to thousandths of a part per mille.

3. Missing observed values are indicated by a hyphen (-).

4. Extrapolated values and values interpolated between remote observations are entered within parentheses.

5. Observed data from different casts are separated by a blank line.

6. The following notations have been used where appropriate.

For premature or delayed closure of water bottle and reversal of thermometers:

p pretrip or posttrip

For values which are not used in interpolation because they seem to be in error:

r rejected value

u uncertain value

SIO
CCOFI
5901

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	ΔD dyn. m	
BLACK DOUGLAS; January 17, 1959; 1047 GCT; 37°47.5'N, 123°15'W; sounding, 58 fm; wind, 270°, force 2; weather, clear; sea, moderate; wire angle, 00°.												60.55
0	13.66	33.39	5.77	293	0	13.66	33.39	5.77	25.04	293	0.00	
9	13.66	33.38	5.79	294	10	13.65	33.38	5.79	25.03	294	0.03	
18	13.57	33.44	5.73	288	20	13.57	33.44	5.72	25.10	287	0.06	
28	13.53	33.46	5.62	285	30	13.54	33.46	5.61	25.11	286	0.09	
37	13.56	33.45	5.60	287	50	12.38	33.48	4.80	25.35	263	0.14	
45	12.92	33.44	5.12	276	75	11.55	33.58	4.18	25.61	239	0.20	
54	11.90	33.52	4.47	251								
64	11.84	33.54	4.30	248								
73	11.60	33.58	4.25	242								
86	10.94	33.61	3.76	228								
BLACK DOUGLAS; January 17, 1959; 1335, 1414 GCT; 37°37'N, 123°38'W; sounding, 1800 fm; wind, 350°, force 2; weather, clear; sea, slight; wire angle, 09°, 10°.												60.60
1	13.42	33.12	5.24	308	0	(13.42)	(33.12)	(5.24)	(24.88)	(308)	(0.00)	
9	13.42	33.09	5.76	311	10	13.42	33.09	5.77	24.86	311	0.03	
28	13.38	33.19	5.84	302	20	13.40	33.13	5.80	24.89	307	0.06	
55	13.04	33.34	5.83	285	30	13.37	33.20	5.84	24.96	301	0.09	
63	12.44	33.35	5.41	274	50	13.06	33.34	5.83	25.11	286	0.15	
72	11.59	33.35	5.05	258	75	11.05	33.38	4.98	25.52	247	0.22	
86	9.96	33.48	4.48	221	100	9.34	33.53	4.21	25.93	208	0.28	
					150	8.42	33.88	3.30	26.35	168	0.37	
99	9.36	33.53	4.21	208	200	8.16	34.08	2.18	26.55	150	0.45	
112	9.01	33.59	4.20	198	250	7.66	34.15	1.56	26.67	138	0.52	
128	8.75	33.74	3.77	183	300	7.06	34.18	1.15	26.79	127	0.59	
146	8.44	33.86	3.49	170	400	6.48	34.24	0.68	26.91	115	0.72	
172	8.26	33.97	2.44	159	500	5.80	34.26	0.50	27.01	106	0.83	
194	8.22	34.07	2.22	151								
242	7.73	34.13	1.64	140								
317	6.90	34.19	1.01	124								
415	6.42	34.24	0.65	114								
542	5.53	34.28	0.41	100								
BLACK DOUGLAS; January 17, 1959; 1917 GCT; 37°21'N, 124°22'W; sounding, 2140 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.												60.70
2	12.90	32.89	5.91	315	0	(12.90)	(32.89)	(5.91)	(24.81)	(315)	(0.00)	
10	12.90	32.90	5.90	315	10	12.90	32.90	5.90	24.81	315	0.03	
28	12.84	32.95	5.92	310	20	12.87	32.93	5.92	24.84	312	0.06	
51	12.78	33.01	5.82	304	30	12.83	32.96	5.90	24.87	309	0.09	
64	12.16	33.30	5.39	272	50	12.78	33.01	5.83	24.92	304	0.16	
73	10.30	33.35	4.69	236	75	10.20	33.36	4.64	25.66	234	0.22	
87	9.26	33.51	4.33	208	100	8.86	33.57	4.31	26.04	198	0.28	
100	8.86	33.57	4.31	198	150	8.59	33.96	2.61	26.40	164	0.37	
113	8.88	33.68	3.79	190	200	8.09	34.06	2.14	26.54	150	0.45	
131	8.92	33.83	2.93	179	250	7.33	34.11	1.80	26.69	136	0.52	
149	8.60	33.96	2.62	165	300	7.00	34.16	1.40	26.78	128	0.59	
175	8.32	33.98	2.45	159	400	6.19	34.22	0.75	26.94	113	0.72	
198	8.12	34.05	2.19	151	500	5.53	34.27	0.47	27.06	101	0.83	
247	7.36	34.11	1.81	136								
323	6.84	34.18	1.19	124								
422	5.96	34.23	0.67	109								
550	5.34	34.29	0.38	97								

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	OBSERVED					INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
60.80	BLACK DOUGLAS; January 18, 1959; 0055, 0123 GCT; 36°58.5'N, 125°02'W; sounding, 2200 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°, missing.											
	1	15.67	33.27	5.62	343	0	(15.67)	(33.27)	(5.62)	(24.51)	(343)	(0.00)
	9	15.67	33.28	5.55	342	10	15.67	33.28	5.55	24.52	342	0.03
	27	15.68	33.28	5.56	342	20	15.68	33.28	5.55	24.52	342	0.07
	55	15.64	33.30	5.61	340	30	15.68	33.28	5.56	24.52	342	0.10
	63	13.40	33.30	6.01	295	50	15.67	33.29	5.59	24.54	341	0.17
	72	12.24	33.19	5.88	282	75	12.20	33.21	5.80	25.18	279	0.25
	86	11.80	33.32	5.18	264	100	11.05	33.37	4.76	25.52	247	0.32
	99	11.06	33.37	4.78	248	150	8.57	33.64	4.49	26.14	188	0.42
						200	8.11	33.94	2.21	26.45	159	0.51
	117	10.40	33.44	4.29	231	250	7.37	34.02	1.87	26.62	143	0.59
	129	9.00	33.50	3.82	205	300	6.79	34.04	1.98	26.72	133	0.66
	147	8.60	33.61	4.54	190	400	5.48	34.04	1.72	26.88	118	0.79
	174	8.42	33.82	3.43	172	500	4.90	34.12	1.04	27.02	105	0.91
	196	8.14	33.93	2.25	160							
	246	7.42	34.02	1.86	144							
	322	6.52	34.05	2.01	129							
	421	5.27	34.04	1.64	117							
	548	4.74	34.16	0.75	100							
60.90	BLACK DOUGLAS; January 18, 1959; 0657 GCT; 36°37'N, 125°47'W; sounding, 2300 fm; wind, 270°, force 2; weather, cloudy; sea, slight; wire angle, 08°.											
	3	13.60	32.66	5.82	346	0	(13.60)	(32.66)	(5.82)	(24.48)	(346)	(0.00)
	11	13.58	32.71	5.75	341	10	13.58	32.71	5.76	24.53	342	0.03
	30	13.58	32.69	5.66	343	20	13.58	32.70	5.71	24.52	342	0.07
	57	13.48	32.74	5.78	337	30	13.58	32.69	5.66	24.51	343	0.10
	66	12.92	33.08	5.42	302	50	13.57	32.72	5.72	24.54	340	0.17
	74	11.70	33.17	5.16	273	75	11.70	33.20	5.12	25.27	271	0.25
	88	11.01	33.39	4.63	245	100	10.65	33.48	3.98	25.67	233	0.31
	102	10.54	33.48	3.89	230	150	8.52	33.69	3.67	26.19	183	0.42
	114	9.40	33.47	4.01	213	200	8.04	33.96	4.30	26.47	157	0.50
	132	8.88	33.62	3.57	194	250	7.20	34.02	4.23	26.64	141	0.58
	151	8.50	33.69	3.68	183	300	6.50	34.02	3.12	26.74	132	0.65
	178	8.26	33.90	3.71	164	400	5.41	34.06	1.83	26.90	116	0.78
	200	8.04	33.96	4.30	157	500	4.83	34.14	0.97	27.04	103	0.89
	250	7.20	34.02	4.23	141							
	326	6.18	34.02	2.58	128							
	425	5.18	34.08	1.54	111							
	551	4.67	34.18	0.70	98							
63.52	BLACK DOUGLAS; January 17, 1959; 0344 GCT; 37°19'N, 122°37'W; sounding, 28 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 03°.											
	0	13.75	33.38	5.65	296	0	13.75	33.38	5.65	25.01	296	0.00
	9	13.74	33.38	5.59	296	10	13.75	33.38	5.59	25.01	296	0.03
	18	13.76	33.38	5.63	296	20	13.76	33.38	5.62	25.01	296	0.06
	27	13.76	33.37	5.60	297	30	13.77	33.37	5.60	25.00	297	0.09
	41	13.78	33.37	5.59	297							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; January 16, 1959; 2246 GCT; 37°02'N, 123°12.5'W; sounding, 1470 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 15°. 63.60

2	13.86	33.06	5.87	321	0	(13.86)	(33.06)	(5.87)	(24.75)	(321)	(0.00)
10	13.84	33.06	5.86	321	10	13.84	33.06	5.86	24.75	321	0.03
19	13.46	33.19	5.87	304	20	13.45	33.20	5.86	24.93	303	0.06
36	13.16	33.30	5.65	290	30	13.26	33.27	5.74	25.02	295	0.09
45	12.90	33.34	5.48	282	50	12.48	33.38	5.07	25.28	270	0.15
54	11.78	33.37	5.02	260	75	10.15	33.45	4.46	25.74	226	0.21
63	11.02	33.37	4.69	247	100	9.23	33.56	4.12	25.97	204	0.27
72	10.31	33.42	4.51	231	150	8.58	33.78	3.69	26.25	178	0.36
98	9.26	33.55	4.16	205	200	8.48	34.03	2.26	26.46	158	0.45
111	9.16	33.62	3.80	198	250	8.12	34.12	1.76	26.59	146	0.53
133	8.96	33.73	3.26	187	300	7.57	34.15	1.56	26.69	136	0.60
158	8.50	33.84	3.88	172	400	6.82	34.24	0.85	26.86	120	0.73
189	8.51	34.00	2.50	160	500	5.84	34.24	0.55	27.00	107	0.85
231	8.31	34.10	1.84	150							
301	7.56	34.15	1.55	136							
387	6.94	34.23	0.91	122							
503	5.81	34.24	0.52	107							

BLACK DOUGLAS; January 16, 1959; 1700 GCT; 36°42.5'N, 123°55'W; sounding, 2100 fm; wind, 360°, force 4; weather, partly cloudy; sea, moderate; wire angle, 00°. 63.70

0	14.74	33.03	5.68	341	0	14.74	33.03	5.68	24.54	341	0.00
9	14.72	33.04	5.66	340	10	14.72	33.04	5.66	24.54	340	0.03
28	14.74	33.04	5.67	340	20	14.72	33.04	5.67	24.54	340	0.07
55	14.72	33.02	5.88	342	30	14.74	33.04	5.68	24.54	340	0.10
64	13.50	33.21	5.96	303	50	14.74	33.02	5.83	24.53	342	0.17
73	12.33	33.19	5.79	283	75	11.98	33.14	5.76	25.18	280	0.25
86	11.31	33.09	5.70	272	100	(11.13)	(33.13)	(5.52)	(25.32)	(266)	(0.32)
99	11.14	33.13	5.53	266							

BLACK DOUGLAS; January 18, 1959; 1215 GCT; 36°08'N, 125°22.5'W; sounding, 2000 fm; wind, 270°, force 6; weather, cloudy; sea, very rough; wire angle, 08°. 63.90

1	14.25	33.30	5.54	311	0	(14.25)	(33.30)	(5.54)	(24.85)	(311)	(0.00)
10	14.25	33.31	5.63	311	10	14.25	33.31	5.63	24.85	311	0.03
28	14.25	33.35	5.68	308	20	14.25	33.33	5.65	24.87	309	0.06
55	14.24	33.35	5.62	308	30	14.25	33.35	5.67	24.88	308	0.09
64	14.22	33.34	5.62	308	50	14.25	33.35	5.63	24.88	308	0.15
73	14.24	33.37	5.78	306	75	14.23	33.38	5.75	24.91	305	0.23
86	13.48	33.35	5.32	293	100	11.77	33.38	4.62	25.40	259	0.30
100	11.77	33.38	4.62	259	150	9.15	33.69	3.27	26.09	193	0.41
113	10.26	33.48	3.93	226	200	8.55	33.97	2.43	26.41	163	0.50
131	9.64	33.62	3.53	206	250	8.08	34.08	1.95	26.56	148	0.58
149	9.17	33.68	3.29	194	300	7.54	34.14	1.52	26.68	137	0.66
176	8.82	33.85	2.95	176	400	6.73	34.24	0.75	26.88	118	0.79
198	8.56	33.97	2.44	163	500	5.97	34.30	0.44	27.02	104	0.90
248	8.10	34.07	1.99	149							
329	7.30	34.16	1.31	132							
423	6.57	34.26	0.62	116							
550	5.62	34.31	0.32	99							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
67.60	BLACK DOUGLAS; January 16, 1959; 0433, 0521 GCT; 36°29'N, 122°47.5'W; sounding, 1620 fm; wind, 290°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°, 12°.										
2	14.00	33.32	5.50	305	0	(14.00)	(33.32)	(5.50)	(24.91)	(305)	(0.00)
11	13.98	33.37	5.57	301	10	13.99	33.37	5.56	24.96	301	0.03
29	13.37	33.35	5.44	291	20	13.38	33.36	5.51	25.01	296	0.06
56	12.60	33.42	5.04	271	30	13.36	33.35	5.43	25.07	290	0.09
64	11.67	33.47	4.61	251	50	13.13	33.38	5.32	25.14	284	0.15
73	10.74	33.48	4.05	234	75	10.63	33.49	4.00	25.68	232	0.21
87	10.04	33.57	3.67	216	100	9.64	33.65	3.45	25.97	204	0.27
99	9.66	33.64	3.47	205	150	8.73	33.98	2.82	26.38	165	0.36
113	9.48	33.74	3.27	195	200	8.08	34.06	2.22	26.55	150	0.44
					250	7.62	34.14	1.53	26.68	137	0.51
130	9.06	33.85	2.94	180	300	7.14	34.15	1.23	26.76	130	0.58
148	8.74	33.97	2.83	166	400	6.51	34.21	0.83	26.88	118	0.71
175	8.47	34.04	2.55	157	500	5.82	34.28	0.52	27.02	104	0.83
196	8.12	34.05	2.29	151							
245	7.66	34.14	1.58	138							
320	6.98	34.16	1.13	127							
417	6.40	34.22	0.77	116							
543	5.51	34.31	0.38	98							
67.70	BLACK DOUGLAS; January 16, 1959; 1109, 1135 GCT; 36°08'N, 123°30'W; sounding, 1900 fm; wind, 350°, force 4; weather, clear; sea, rough; wire angle, 28°, 35°.										
1	13.88	33.06	5.71	322	0	(13.88)	(33.06)	(5.71)	(24.74)	(322)	(0.00)
9	13.88	33.05	5.65	323	10	13.88	33.05	5.65	24.73	323	0.03
25	13.89	33.05	5.66	323	20	13.89	33.05	5.66	24.73	323	0.06
49	13.54	33.27	5.63	299	30	13.80	33.07	5.65	24.76	320	0.10
64p	13.26	33.28	5.56	294	50	13.54	33.27	5.63	24.98	299	0.16
76p	12.46	33.42	4.71	269	75	12.50	33.42	4.72	25.28	270	0.23
88p	10.79	33.40	5.19	241	100	9.96	33.53	3.83	25.83	218	0.29
					150	9.04	33.90	2.66	26.27	176	0.39
93	10.42	33.44	4.08	232	200	8.33	34.07	2.03	26.52	153	0.47
105	9.78	33.58	3.69	211	250	7.86	34.10	1.61	26.61	144	0.55
119	9.52	33.69	3.31	199	300	7.14	34.11	1.50	26.72	134	0.62
141	9.18	33.83	2.78	183							
158	8.92	33.97	2.57	169							
197	8.38	34.07	2.06	153							
257	7.78	34.10	1.58	143							
345	6.42	34.12	1.48	123							
67.90	BLACK DOUGLAS; January 18, 1959; 1714 GCT; 35°38'N, 124°57'W; sounding, 2400 fm; wind, 300°, force 5; weather, cloudy; sea, very rough; wire angle 08°.										
3	14.30	33.10	5.58	327	0	(14.30)	(33.10)	(5.58)	(24.68)	(327)	(0.00)
11	14.32	33.09	5.59	328	10	14.32	33.09	5.59	24.67	328	0.03
29	14.32	33.07	5.62	329	20	14.32	33.08	5.60	24.67	328	0.06
56	14.08	33.24	5.58	312	30	14.31	33.07	5.61	24.66	329	0.10
65	13.44	33.25	5.39	300	50	14.10	33.20	5.59	24.80	316	0.16
74	13.08	33.25	5.20	293	75	12.92	33.25	5.17	25.08	290	0.24
88	11.14	33.25	5.05	257	100	10.65	33.34	4.72	25.57	242	0.31
101	10.56	33.35	4.67	240	150	9.42	33.75	2.11	26.09	193	0.42
114	10.00	33.54	3.80	218	200	8.95	34.02	2.13	26.39	165	0.51
132	9.82	33.64	2.53	207	250	8.59	34.10	1.75	26.50	154	0.59
150	9.42	33.75	2.11	193	300	7.86	34.14	1.54	26.64	141	0.66
176	9.10	33.90	2.45	177	400	6.83	34.18	1.03	26.82	124	0.80
198	8.96	34.01	2.14	166	500	6.00	34.18	0.81	26.93	113	0.93
248	8.60	34.10	1.75	154							
323	7.56	34.15	1.42	136							
422	6.66	34.19	0.93	121							
547	5.64	34.18	0.74	109							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; January 21, 1959; 2056 GCT; 35°53'N, 122°23'W; sounding, 1700 fm; wind, 250°, force 2; weather, cloudy; sea, very rough; wire angle, 00°.											70.60
1	13.81	33.19	5.44	311	0	(13.81)	(33.19)	(5.44)	(24.85)	(311)	(0.00)
10	13.60	33.21	5.47	305	10	13.60	33.21	5.47	24.91	305	0.03
29	13.52	33.23	5.49	302	20	13.53	33.23	5.48	24.94	303	0.06
51	13.36	33.19	5.34	302	30	13.52	33.23	5.48	24.95	302	0.09
60	11.42	33.40	4.41	252	50	13.41	33.20	5.35	24.95	302	0.15
69	10.32	33.44	4.09	230	75	10.25	33.46	3.98	25.73	227	0.22
78	10.20	33.49	3.87	224	100	9.59	33.65	3.50	25.98	203	0.27
91	9.86	33.63	3.58	208	150	8.83	33.99	2.42	26.37	166	0.36
105	9.44	33.68	3.40	198	200	8.29	34.08	1.97	26.52	152	0.44
123	8.98	33.82	2.96	181	250	7.83	34.16	1.66	26.67	138	0.52
142	8.90	33.95	2.55	170	300	7.24	34.13	1.56	26.72	134	0.59
164	8.68	34.03	2.21	161	400	6.54	34.29	0.76	26.95	112	0.72
187	8.41	34.04	2.08	156	500	5.69	34.29	0.49	27.06	102	0.83
232	8.02	34.17	1.72	141							
305	7.18	34.13	1.50	133							
396	6.58	34.29	0.77	112							
514	5.56	34.29	0.45	100							
BLACK DOUGLAS; January 22, 1959; 0205 GCT; 35°36'N, 123°06'W; sounding, 2150 fm; wind, 270°, force 1; weather, partly cloudy; sea, very rough; wire angle, 07°.											70.70
0	13.26	33.40	5.73	285	0	13.26	33.40	5.73	25.12	285	0.00
9	13.26	33.40	5.75	285	10	13.26	33.40	5.75	25.12	285	0.03
27	13.16	33.39	5.76	284	20	13.19	33.40	5.76	25.13	284	0.06
49	13.16	33.40	5.72	283	30	13.16	33.39	5.75	25.14	283	0.08
58	11.72	33.55	4.39	240	50	13.16	33.40	5.72	25.14	283	0.14
67	11.24	33.57	4.19	236	75	10.78	33.54	3.97	25.70	230	0.20
76	10.70	33.54	3.97	229	100	9.93	33.66	3.84	25.94	207	0.26
90	10.18	33.62	3.96	214	150	9.11	33.92	2.73	26.28	175	0.36
103	9.86	33.68	3.73	205	200	8.39	34.11	2.04	26.54	151	0.44
121	9.56	33.78	3.26	193	250	7.75	34.19	1.62	26.70	135	0.51
138	9.29	33.86	2.99	183	300	7.12	34.23	1.35	26.82	124	0.58
160	8.96	33.96	2.54	170	400	6.39	34.26	0.75	26.94	113	0.70
181	8.63	34.06	2.24	158	500	5.75	34.29	0.55	27.05	102	0.81
225	8.08	34.15	1.80	143							
296	7.16	34.23	1.36	124							
385	6.49	34.25	0.81	114							
501	5.74	34.29	0.55	102							
BLACK DOUGLAS; January 19, 1959; 0005 GCT; 34°53'N, 124°28'W; sounding, 2250 fm; wind, 360°, force 7; weather, cloudy; sea, very rough; wire angle, 17°.											70.90
1	13.55	33.19	5.88	306	0	(13.55)	(33.19)	(5.88)	(24.90)	(306)	(0.00)
9	13.55	33.17	5.57	307	10	13.55	33.17	5.58	24.89	307	0.03
27	13.54	33.15	5.79	308	20	13.55	33.16	5.70	24.89	307	0.06
53	12.84	33.21	5.42	291	30	13.54	33.15	5.77	24.88	308	0.09
61	12.38	33.22	5.33	282	50	13.20	33.19	5.50	24.98	299	0.15
70	11.76	33.22	5.20	270	75	11.46	33.24	5.13	25.34	264	0.22
83	11.04	33.28	5.02	254	100	10.05	33.48	4.03	25.78	223	0.28
96	10.18	33.45	4.12	227	150	8.75	33.78	3.80	26.22	180	0.39
113	9.70	33.56	3.77	211	200	8.35	34.04	2.10	26.48	155	0.47
126	9.00	33.65	3.68	194	250	7.99	34.17	1.53	26.65	140	0.55
144	8.75	33.73	4.00	184	300	7.51	34.22	1.12	26.76	130	0.62
170	8.74	33.96	2.51	167	400	6.38	34.22	0.78	26.91	115	0.74
191	8.44	34.02	2.22	158	500	5.68	34.27	0.56	27.04	103	0.86
239	8.07	34.14	1.67	144							
313	7.36	34.22	1.06	128							
411	6.29	34.22	0.74	114							
536	5.50	34.31	0.46	98							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T}{}^{-5}{}_{3}$	Z	T	S	O_2	σ_t	$\delta_{T}{}^{-5}{}_{3}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

73.55 BLACK DOUGLAS; January 22, 1959; 1625 GCT; 35°27.5'N, 121°38'W; sounding, 540 fm; wind, 090°, force 1; weather, cloudy; sea, smooth; wire angle, 00°.

0	14.34	33.51	5.59	298	0	14.34	33.51	5.59	24.99	298	0.00
9	14.34	33.49	5.52	299	10	14.34	33.49	5.51	24.98	299	0.03
28	14.34	33.49	5.49	299	20	14.34	33.49	5.50	24.98	299	0.06
50	14.24	33.49	5.44	298	30	14.34	33.49	5.48	24.98	299	0.09
59	13.73	33.49	5.08	287	50	14.24	33.49	5.44	24.99	298	0.15
68	12.18	33.51	4.34	257	75	11.65	33.56	3.96	25.55	244	0.22
77	11.50	33.58	3.82	240	100	10.72	33.73	3.29	25.86	215	0.28
90	11.11	33.70	3.47	224	150	9.14	33.91	2.76	26.26	176	0.37
104	10.53	33.75	3.20	210	200	8.57	34.08	2.06	26.49	155	0.46
122	9.77	33.84	2.91	191	250	8.14	34.16	1.70	26.62	143	0.53
141	9.30	33.89	2.78	180	300	7.66	34.20	1.45	26.71	134	0.60
163	8.98	33.96	2.64	170	400	6.91	34.24	1.03	26.85	121	0.74
185	8.70	34.04	2.21	160	500	5.83	34.26	0.60	27.01	106	0.85
231	8.34	34.14	1.82	147							
304	7.62	34.20	1.39	133							
395	6.95	34.24	1.04	121							
512	5.71	34.26	0.53	104							

73.60 BLACK DOUGLAS; January 22, 1959; 1249 GCT; 35°18'N, 121°58.5'W; sounding, 1300 fm; wind, 090°, force 1; weather, cloudy; sea, slight; wire angle, 04°.

1	14.32	33.51	5.63	297	0	(14.32)	(33.51)	(5.63)	(25.00)	(297)	(0.00)
9	14.33	33.48	5.57	300	10	14.33	33.48	5.57	24.97	300	0.03
28	14.32	33.52	5.52	296	20	14.32	33.51	5.54	24.99	298	0.06
50	14.32	33.48	5.51	300	30	14.32	33.52	5.52	25.00	297	0.09
59	14.24	33.49	5.39	297	50	14.32	33.48	5.51	24.97	300	0.15
69	13.36	33.50	4.60	279	75	12.40	33.55	4.18	25.40	258	0.22
77	12.22	33.55	4.14	255	100	10.78	33.62	3.85	25.77	224	0.28
91	11.40	33.57	4.03	239	150	9.57	33.90	2.70	26.17	186	0.38
105	10.40	33.65	3.72	215	200	8.87	34.02	2.17	26.39	165	0.47
123	9.66	33.68	3.56	202	250	8.00	34.06	1.96	26.56	149	0.55
141	9.76	33.80	2.94	195	300	7.19	34.09	1.65	26.70	135	0.63
163	9.32	33.96	2.46	175	400	6.18	34.12	1.04	26.85	121	0.76
185	9.06	34.00	2.23	169	500	5.57	34.19	0.58	26.99	108	0.88
230	8.38	34.04	2.06	156							
301	7.18	34.09	1.64	135							
391	6.24	34.11	1.09	122							
508	5.52	34.20	0.53	106							

73.70 BLACK DOUGLAS; January 22, 1959; 0745 GCT; 34°58'N, 122°40'W; sounding, 2200 fm; wind, 090°, force 1; weather, cloudy; sea, slight; wire angle, 00°.

0	13.50	33.22	5.82	303	0	13.50	33.22	5.82	24.94	303	0.00
9	13.50	33.24	5.82	301	10	13.49	33.24	5.82	24.95	302	0.03
27	13.36	33.19	5.82	302	20	13.41	33.22	5.82	24.95	302	0.06
55	13.39	33.22	5.82	300	30	13.37	33.19	5.82	24.95	302	0.09
64	12.09	33.35	4.97	267	50	13.39	33.22	5.82	24.96	300	0.15
73	11.32	33.46	4.37	245	75	11.20	33.48	4.29	25.57	242	0.22
86	10.61	33.55	3.99	227	100	9.61	33.53	4.17	25.89	212	0.28
100	9.61	33.53	4.17	212	150	9.05	33.89	2.81	26.26	177	0.37
113	9.32	33.66	3.75	198	200	8.31	34.02	2.22	26.48	156	0.46
131	9.28	33.80	3.17	187	250	7.69	34.14	1.80	26.67	138	0.53
150	9.05	33.89	2.81	177	300	7.44	34.22	1.26	26.76	129	0.60
177	8.74	33.98	2.48	165	400	6.46	34.24	0.67	26.92	115	0.73
199	8.32	34.02	2.23	156	500	5.72	34.30	0.44	27.05	102	0.84
249	7.70	34.14	1.81	138							
326	7.32	34.24	1.01	126							
426	6.20	34.25	0.58	111							
553	5.48	34.34	0.37	96							

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OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	
BLACK DOUGLAS; January 23, 1959; 0201 GCT; 34°54'N, 121°13'W; sounding, 280 fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 00°.												77.55
0	14.61	33.50	5.74	304	0	14.61	33.50	5.74	24.92	304	0.00	
9	14.60	33.52	5.82	302	10	14.59	33.52	5.82	24.94	302	0.03	
28	14.50	33.52	5.69	300	20	14.55	33.52	5.78	24.94	302	0.06	
45	14.48	33.51	5.67	300	30	14.50	33.52	5.69	24.96	300	0.09	
69	12.13	33.51	5.68	256	50	14.38	33.51	5.67	25.13	284	0.15	
91	10.83	33.60	4.06	227	75	11.70	33.52	5.25	25.52	247	0.22	
113	9.72	33.68	3.80	202	100	10.36	33.64	3.90	25.87	214	0.27	
150	9.38	33.89	2.78	182	150	9.38	33.89	2.78	26.20	182	0.37	
186	8.78	34.05	2.27	161	200	8.54	34.09	2.09	26.50	154	0.46	
232	8.04	34.14	1.80	144	250	7.87	34.16	1.71	26.66	139	0.53	
277	7.64	34.18	1.60	135	300	7.42	34.18	1.53	26.74	132	0.60	
372	6.59	34.19	1.29	120								
BLACK DOUGLAS; January 23, 1959; 0459 GCT; 34°44'N, 121°34'W; sounding, 500 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.												77.60
1	14.54	33.37	5.71	312	0	(14.54)	(33.37)	(5.71)	(24.84)	(312)	(0.00)	
10	14.54	33.36	5.65	313	10	14.54	33.36	5.65	24.83	313	0.03	
28	14.52	33.34	5.58	314	20	14.53	33.35	5.61	24.82	314	0.06	
55	14.26	33.35	5.55	308	30	14.52	33.34	5.58	24.82	314	0.09	
64	13.94	33.40	5.51	294	50	14.52	33.35	5.55	24.83	313	0.16	
73	12.52	33.36	5.10	274	75	12.51	33.36	5.10	25.25	273	0.23	
87	11.00	33.51	4.28	236	100	10.19	33.57	4.05	25.82	219	0.29	
101	10.18	33.57	4.04	218	150	8.93	33.91	2.75	26.30	173	0.39	
114	9.58	33.68	3.68	201	200	8.40	34.04	1.91	26.48	156	0.48	
132	9.10	33.79	3.31	185	250	7.84	34.12	1.54	26.64	141	0.54	
151	8.92	33.91	2.73	173	300	7.29	34.18	1.12	26.76	130	0.62	
178	8.70	33.98	2.46	165	400	6.52	34.24	0.60	26.91	115	0.75	
200	8.40	34.04	1.91	156	500	5.94	34.29	0.42	27.02	104	0.86	
251	7.83	34.14	1.52	141								
327	7.00	34.20	0.92	125								
425	6.38	34.26	0.54	112								
552	5.66	34.33	0.37	98								
BLACK DOUGLAS; January 23, 1959; 0957 GCT; 34°24'N, 122°16'W; sounding, 2100 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.												77.70
0	14.30	33.32	5.68	311	0	14.30	33.32	5.68	24.85	311	0.00	
9	14.31	33.32	5.60	311	10	14.31	33.32	5.60	24.85	311	0.03	
28	14.27	33.35	5.62	308	20	14.28	33.34	5.61	24.87	309	0.06	
50	14.28	33.33	5.65	310	30	14.27	33.35	5.62	24.88	308	0.09	
59	14.26	33.33	5.64	310	50	14.28	33.33	5.65	24.86	310	0.15	
68	11.73	33.31	4.73	263	75	10.78	33.39	4.39	25.58	241	0.22	
77	10.78	33.40	4.38	240	100	9.58	33.49	3.98	25.87	214	0.28	
90	9.90	33.46	4.18	220	150	8.69	33.82	2.97	26.26	177	0.38	
104	9.43	33.51	3.87	211	200	8.12	33.99	2.42	26.49	155	0.46	
121	9.10	33.68	3.43	183	250	7.44	34.03	1.95	26.62	143	0.54	
139	8.78	33.77	3.14	181	300	6.85	34.04	1.63	26.71	134	0.61	
161	8.60	33.86	2.78	172	400	5.96	34.13	0.90	26.90	117	0.74	
183	8.32	33.95	2.61	161	500	5.56	34.24	0.48	27.04	104	0.86	
227	7.72	34.02	2.10	148								
299	6.86	34.04	1.64	135								
389	6.02	34.12	0.97	118								
507	5.54	34.25	0.44	102								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
80.52	BLACK DOUGLAS; January 23, 1959; 1906 GCT; 34°25'N, 120°35'W; sounding, 117 fm; wind, 360°, force 3; weather, clear; sea, moderate; wire angle, 00°.										
0	15.40	33.51	5.50	320	0	15.40	33.51	5.50	24.76	320	0.00
9	15.37	33.51	5.55	319	10	15.37	33.51	5.55	24.77	319	0.03
28	13.89	33.53	4.93	288	20	14.35	33.50	5.30	24.98	299	0.06
46	12.75	33.60	4.34	260	30	13.80	33.54	4.87	25.12	285	0.09
69	11.64	33.64	3.73	238	50	12.58	33.60	4.24	25.42	257	0.15
94	10.80	33.75	3.39	215	75	11.44	33.68	3.64	25.68	232	0.21
118	10.31	33.81	3.14	202	100	10.65	33.77	3.33	25.90	211	0.26
80.55	BLACK DOUGLAS; January 23, 1959; 2103 GCT; 34°19'N, 120°48'W; sounding, 410 fm; wind, 360°, force 2; weather, clear; sea, slight; wire angle, 07°.										
0	14.13	33.54	5.13	291	0	14.13	33.54	5.13	25.06	291	0.00
9	13.87	33.48	4.93	291	10	13.86	33.48	4.92	25.06	291	0.03
26	13.78	33.53	4.81	285	20	13.79	33.52	4.86	25.10	287	0.06
49	13.50	33.53	4.66	280	30	13.62	33.53	4.78	25.13	284	0.09
58	12.26	33.48	4.88	261	50	13.50	33.53	4.66	25.18	280	0.14
67	11.04	33.51	4.25	237	75	10.77	33.64	3.82	25.79	222	0.20
76	10.74	33.65	3.79	221	100	9.98	33.77	3.22	26.02	200	0.26
90	10.20	33.74	3.41	206	150	9.25	33.96	2.54	26.29	174	0.35
103	9.91	33.78	3.16	198	200	8.83	34.06	2.18	26.43	161	0.44
121	9.52	33.91	2.81	182	250	8.34	34.15	1.77	26.58	147	0.52
139	9.31	33.96	2.58	175	300	7.89	34.20	1.43	26.68	137	0.59
161	9.20	33.97	2.51	173	400	7.18	34.30	0.92	26.87	119	0.72
183	9.00	34.02	2.33	166	500	6.49	34.29	0.65	26.95	111	0.84
228	8.55	34.13	1.92	151							
300	7.89	34.20	1.43	137							
389	7.24	34.30	0.98	120							
507	6.44	34.29	0.63	111							
80.60	BLACK DOUGLAS; January 23, 1959; 2356 GCT; 34°09'N, 121°09'W; sounding, 1200 fm; wind, 360°, force 2; weather, clear; sea, slight; wire angle, 03°.										
0	14.64	33.51	5.67	304	0	14.64	33.51	5.67	24.92	304	0.00
9	14.50	33.50	5.84	302	10	14.49	33.50	5.84	24.95	302	0.03
27	14.34	33.54	5.75	295	20	14.40	33.52	5.79	24.99	298	0.06
50	14.24	33.50	5.56	297	30	14.33	33.53	5.65	25.01	296	0.09
59	13.16	33.46	5.10	279	50	14.24	33.50	5.56	25.00	297	0.15
68	12.34	33.46	4.89	266	75	11.80	33.50	4.73	25.48	251	0.22
77	11.61	33.51	4.65	247	100	10.02	33.59	4.02	25.86	215	0.28
91	10.45	33.54	4.30	225	150	8.74	33.92	2.79	26.34	169	0.37
104	9.82	33.61	3.91	210	200	8.23	34.04	2.51	26.50	154	0.45
122	9.18	33.79	3.33	186	250	7.83	34.08	2.03	26.60	145	0.53
140	8.83	33.87	3.04	175	300	7.49	34.16	1.52	26.71	134	0.60
163	8.61	33.98	2.58	164	400	6.56	34.30	0.82	26.95	112	0.73
185	8.36	34.02	2.62	157	500	5.95	34.34	0.40	27.06	102	0.84
231	7.98	34.06	2.20	148							
303	7.46	34.16	1.50	134							
393	6.60	34.29	0.88	113							
511	5.90	34.34	0.37	100							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; January 24, 1959; 0440 GCT; 33°49'N, 121°51'W; sounding, 2000 fm; wind, 270°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°. 80.70

0	15.09	33.43	5.70	320	0	15.09	33.43	5.70	24.76	320	0.00
9	15.09	33.46	5.63	317	10	15.09	33.46	5.63	24.79	317	0.03
27	15.02	33.45	5.64	317	20	15.05	33.45	5.64	24.79	317	0.06
49	14.80	33.43	5.60	313	30	15.01	33.44	5.63	24.80	316	0.10
58	13.28	33.43	5.28	283	50	14.78	33.43	5.59	24.83	313	0.16
67	12.86	33.47	5.21	272	75	12.59	33.57	4.99	25.39	259	0.23
76	12.54	33.58	4.97	258	100	10.65	33.57	4.47	25.74	226	0.29
90	11.49	33.57	4.69	240	150	9.09	33.86	3.12	26.23	180	0.39
104	10.30	33.57	4.34	220	200	8.37	34.02	2.45	26.47	157	0.48
122	9.68	33.69	3.81	202	250	7.93	34.11	1.98	26.61	144	0.56
140	9.26	33.81	3.26	186	300	7.55	34.21	1.56	26.74	132	0.63
162	8.90	33.91	2.98	173	400	6.72	34.32	0.77	26.94	113	0.75
185	8.54	33.98	2.61	162	500	6.12	34.33	0.43	27.03	104	0.87
230	8.09	34.07	2.15	149							
302	7.53	34.21	1.51	131							
393	6.78	34.31	0.79	114							
511	6.06	34.33	0.41	103							

BLACK DOUGLAS; January 24, 1959; 0954 GCT; 33°29'N, 122°32'W; sounding, 2400 fm; wind, 260°, force 2; weather, cloudy; sea, slight; wire angle, 06°. 80.80

1	15.15	33.45	5.57	319	0	(15.15)	(33.45)	(5.57)	(24.77)	(319)	(0.00)
9	15.14	33.46	5.56	318	10	15.14	33.46	5.56	24.78	318	0.03
28	15.12	33.45	5.57	318	20	15.14	33.46	5.57	24.78	318	0.06
50	14.90	33.40	5.55	318	30	15.11	33.45	5.57	24.78	318	0.10
59	14.84	33.39	5.63	317	50	14.90	33.40	5.55	24.78	318	0.16
68	14.40	33.40	5.62	307	75	13.20	33.39	5.24	25.13	284	0.23
77	12.86	33.39	5.13	258	100	10.81	33.49	4.38	25.65	235	0.30
91	11.30	33.40	4.67	250	150	9.05	33.84	3.06	26.22	181	0.41
105	10.54	33.51	4.26	228	200	8.35	33.97	2.65	26.44	160	0.49
122	9.79	33.60	4.08	210	250	7.72	34.06	2.02	26.60	144	0.57
140	9.24	33.75	3.46	190	300	7.16	34.13	1.48	26.73	132	0.64
163	8.83	33.89	2.77	174	400	6.30	34.21	0.72	26.91	115	0.77
185	8.54	33.93	2.80	166	500	5.89	34.26	0.45	27.00	106	0.88
230	7.96	34.04	2.21	150							
302	7.14	34.13	1.47	132							
391	6.34	34.20	0.75	116							
504	5.86	34.27	0.43	105							

BLACK DOUGLAS; January 24, 1959; 1458 GCT; 33°07'N, 123°13'W; sounding, 2500 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 03°. 80.90

0	15.55	33.25	5.60	342	0	15.55	33.25	5.60	24.52	342	0.00
9	15.55	33.23	5.59	344	10	15.55	33.23	5.59	24.51	344	0.03
27	15.53	33.22	5.56	344	20	15.54	33.22	5.58	24.51	344	0.07
50	15.11	33.20	5.65	337	30	15.50	33.22	5.56	24.52	343	0.10
59	14.78	33.20	5.69	330	50	15.11	33.20	5.65	24.58	337	0.17
68	14.50	33.22	5.66	322	75	14.46	33.21	5.66	24.74	322	0.25
77	14.43	33.21	5.66	322	100	12.04	33.20	5.42	25.20	277	0.33
90	12.90	33.19	5.65	293	150	9.06	33.62	4.01	26.05	197	0.45
104	11.66	33.22	5.25	269	200	8.35	33.89	2.98	26.38	166	0.54
122	10.14	33.38	4.92	232	250	7.82	34.00	2.32	26.54	151	0.62
140	9.25	33.54	4.27	206	300	7.00	34.04	2.00	26.69	136	0.70
163	8.82	33.71	3.75	187	400	6.17	34.17	0.94	26.90	117	0.83
185	8.48	33.84	3.28	172	500	5.62	34.24	0.50	27.02	104	0.94
230	8.10	33.97	2.46	157							
303	6.96	34.05	1.96	135							
394	6.20	34.16	0.99	117							
512	5.55	34.25	0.45	103							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
82.47	BLACK DOUGLAS; January 25, 1959; 2148 GCT; 34°15'N, 119°58'W; sounding, 250 fm; wind, 350°, force 3; weather, partly cloudy; sea, moderate; wire angle, 12°.										
1	15.54	33.55	5.56	320	0	(15.54)	(33.55)	(5.56)	(24.76)	(320)	(0.00)
9	15.48	33.53	5.56	320	10	15.46	33.53	5.53	24.76	320	0.03
27	15.18	33.53	5.38	314	20	15.43	33.53	5.49	24.77	319	0.06
45	14.18	33.51	4.96	295	30	15.00	33.53	5.29	24.86	310	0.10
67	13.17	33.51	4.54	275	50	14.13	33.51	4.93	25.04	293	0.16
89	11.98	33.60	3.99	246	75	12.98	33.52	4.45	25.27	271	0.23
112	11.00	33.68	3.62	224	100	11.74	33.61	3.90	25.58	241	0.29
147	9.88	33.87	2.81	191	150	9.82	33.88	2.77	26.13	190	0.40
183	9.30	33.96	2.36	175	200	9.04	34.03	2.12	26.36	167	0.49
227	8.62	34.11	1.70	154	250	8.43	34.14	1.46	26.56	149	0.57
272	8.25	34.16	1.29	145	300	8.02	34.18	1.12	26.65	140	0.64
366	7.46	34.22	0.77	130							
83.40	BLACK DOUGLAS; January 26, 1959; 0234 GCT; 34°14'N, 119°22'W; sounding, 12 fm; wind, 280°, force 2; weather, clear; sea, very rough; wire angle, 00°.										
0	15.32	33.53	5.66	316	0	15.32	33.53	5.66	24.80	316	0.00
9	15.30	33.56	5.66	314							
83.43	BLACK DOUGLAS; January 26, 1959; 0045 GCT; 34°08'N, 119°34'W; sounding, 130 fm; wind, 280°, force 6; weather, partly cloudy; sea, rough; wire angle, 10°.										
0	15.34	33.58	5.52	314	0	15.34	33.58	5.52	24.82	314	0.00
9	15.32	33.53	5.58	316	10	15.31	33.53	5.58	24.80	316	0.03
27	15.10	33.51	5.54	313	20	15.19	33.51	5.57	24.81	315	0.06
45	14.14	33.51	5.07	294	30	15.07	33.51	5.52	24.84	312	0.09
67	13.81	33.55	4.58	284	50	14.02	33.52	4.90	25.06	290	0.15
89	11.06	33.64	3.78	227	75	12.80	33.58	4.21	25.36	263	0.22
112	10.27	33.73	3.27	207	100	10.98	33.67	3.71	25.76	224	0.29
148	9.40	33.98	2.32	175	150	9.36	33.99	2.30	26.29	174	0.39
183	8.96	34.08	1.98	161							
83.51	BLACK DOUGLAS; January 25, 1959; 1743 GCT; 33°57'N, 120°07.5'W; sounding, 78 fm; wind, 270°, force 2; weather, fog; sea, moderate; wire angle, 05°.										
0	14.77	33.48	5.62	309	0	14.77	33.48	5.62	24.87	309	0.00
9	14.76	33.50	5.59	307	10	14.75	33.50	5.59	24.89	307	0.03
27	14.58	33.49	5.57	305	20	14.63	33.49	5.59	24.90	306	0.06
45	13.55	33.49	5.08	284	30	14.57	33.49	5.56	24.92	304	0.09
68	11.62	33.61	4.06	239	50	13.20	33.50	4.90	25.22	276	0.15
90	10.88	33.66	3.71	223	75	11.36	33.63	3.92	25.67	233	0.21
83.55	BLACK DOUGLAS; January 25, 1959; 1420, 1456 GCT; 33°44'N, 120°24.5'W; sounding, 800 fm; wind, 270°, force 2; weather, fog; sea, moderate; wire angle, 06°, 06°.										
1	14.74	33.48	5.66	308	0	(14.74)	(33.48)	(5.66)	(24.88)	(308)	(0.00)
10	14.74	33.51	5.68	306	10	14.74	33.51	5.68	24.90	306	0.03
28	14.73	33.50	5.68	306	20	14.74	33.50	5.68	24.90	306	0.06
41	14.02	33.48	5.39	294	30	14.73	33.50	5.68	24.90	306	0.09
50	13.54	33.48	5.06	284	50	13.54	33.48	5.06	25.13	284	0.15
59	13.05	33.49	4.87	275	75	11.16	33.56	4.09	25.65	235	0.22
68	11.89	33.53	4.28	250	100	9.91	33.74	3.29	26.01	201	0.27
					150	9.27	33.87	2.65	26.21	182	0.37
86	10.46	33.63	3.90	218	200	8.39	34.12	1.88	26.55	150	0.45
99	9.92	33.74	3.30	201	250	8.05	34.16	1.68	26.63	142	0.53
117	9.69	33.78	3.22	195	300	7.61	34.19	1.32	26.71	134	0.60
136	9.49	33.80	2.79	190	400	6.89	34.24	0.81	26.86	120	0.73
162	9.07	33.95	2.53	172	500	6.40	34.28	0.57	26.96	111	0.85
199	8.40	34.12	1.89	150							
249	8.06	34.16	1.69	142							
325	7.40	34.20	1.14	130							
419	6.79	34.25	0.76	118							
550	6.15	34.29	0.48	107							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T}^{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T}^{-5} 10^{-5} cm^3/g	ΔD dyn. m

BLACK DOUGLAS; January 25, 1959; 1105 GCT; 33°35'N, 120°45.5'W; sounding, 750 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 05°. 83.60

1	14.47	33.43	5.75	306	0	(14.47)	(33.43)	(5.75)	(24.90)	(306)	(0.00)
10	14.46	33.42	5.74	307	10	14.46	33.42	5.74	24.89	307	0.03
28	14.50	33.45	5.68	305	20	14.47	33.44	5.70	24.90	306	0.06
51	14.34	33.48	5.47	300	30	14.49	33.46	5.65	24.91	305	0.09
59	13.94	33.44	5.40	295	50	14.35	33.48	5.48	24.97	300	0.15
68	12.98	33.45	4.86	272	75	11.50	33.39	4.67	25.45	254	0.22
77	11.35	33.38	4.66	252	100	10.42	33.57	4.30	25.78	223	0.28
91	10.72	33.73r	4.44		150	9.01	33.87	3.13	26.25	178	0.38
105	10.22	33.57	4.22	219	200	8.19	34.04	2.36	26.52	153	0.47
122	9.70	33.64	3.99	205	250	7.71	34.10	1.79	26.64	141	0.54
139	9.20	33.78	3.41	187	300	7.53	34.17	1.35	26.71	134	0.62
161	8.83	33.95	2.86	169	400	6.52	34.26	0.71	26.92	114	0.74
184	8.44	34.02	2.44	158	500	5.99	34.34	0.43	27.05	102	0.86
228	7.83	34.08	2.00	145							
298	7.55	34.17	1.36	135							
387	6.62	34.25	0.75	116							
503	5.98	34.34	0.42	101							

BLACK DOUGLAS; January 25, 1959; 0555 GCT; 33°14'N, 121°26'W; sounding, 2140 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 03°. 83.70

0	14.86	33.39	5.70	317	0	14.86	33.39	5.70	24.79	317	0.00
9	14.86	33.40	5.71	317	10	14.86	33.40	5.71	24.79	317	0.03
27	14.80	33.37	5.69	317	20	14.82	33.38	5.70	24.79	317	0.06
50	14.60	33.46	5.67	307	30	14.78	33.36	5.68	24.79	317	0.10
59	14.42	33.46	5.56	303	50	14.60	33.46	5.67	24.89	307	0.16
68	12.67	33.37	5.04	276	75	11.95	33.47	4.62	25.45	254	0.23
77	11.76	33.49	4.56	251	100	10.64	33.56	4.06	25.74	226	0.29
90	11.08	33.55	4.30	235	150	9.03	33.79	3.24	26.19	184	0.39
104	10.45	33.57	3.99	222	200	8.38	33.98	2.61	26.44	160	0.48
122	9.64	33.62	3.90	206	250	7.78	34.10	1.89	26.62	142	0.56
140	9.18	33.76	3.37	188	300	7.11	34.14	1.51	26.75	131	0.63
163	8.88	33.84	3.10	178	400	6.60	34.26	0.71	26.91	115	0.76
185	8.55	33.93	2.89	166	500	6.14	34.32	0.48	27.02	105	0.87
229	8.06	34.08	2.08	148							
301	7.10	34.14	1.51	131							
392	6.63	34.25	0.73	116							
510	6.10	34.33	0.46	104							

BLACK DOUGLAS; January 30, 1959; 0049 GCT; 32°54'N, 122°07.5'W; sounding, 2150 fm; wind, 350°, force 2; weather, cloudy; sea, moderate; wire angle, 00°. 83.80

0	15.30	33.46	5.62	321	0	15.30	33.46	5.62	24.75	321	0.00
9	15.30	33.44	5.57	323	10	15.30	33.44	5.58	24.73	323	0.03
27	15.28	33.44	5.60	323	20	15.28	33.44	5.59	24.73	323	0.06
36	15.19	33.42	5.62	322	30	15.25	33.44	5.61	24.73	323	0.10
45	15.06	33.46	5.53	317	50	14.50	33.45	5.38	24.90	306	0.16
54	13.38a)	33.42	5.17	286	75	10.69	33.48	4.33	25.67	233	0.23
63	11.80	33.46	4.59	254	100	9.57	33.67	3.66	26.01	201	0.28
76	10.69	33.48	4.33	233	150	8.75	33.93	2.66	26.34	169	0.38
90	9.94	33.61	3.70	211	200	8.00	34.08	2.10	26.58	147	0.46
103	9.48	33.69	3.66	198	250	7.54	34.16	1.55	26.70	135	0.53
125	9.28	33.80	2.97	187	300	6.97	34.16	1.21	26.79	127	0.60
151	8.74	33.93b)	2.66	169	400	6.17	34.21	0.81	26.94	113	0.72
183	8.12	34.02	2.38	153	500	5.64	34.30	0.45	27.07	100	0.83
227	7.80	34.14	1.78	140							
299	6.98	34.16	1.24	127							
389	6.23	34.20	0.85	115							
507	5.61	34.31	0.42	99							

a) Mean value of 13.32 and 13.44°C.
b) Loose bottle cap; value falls on property curve.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

83.90 BLACK DOUGLAS; January 24, 1959; 1943 GCT; 32°34'N, 122°48'W; sounding, 2100 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 05°.

0	15.16	33.48	5.66	317	0	15.16	33.48	5.66	24.79	317	0.00
8	15.14	33.46	5.62	318	10	15.13	33.46	5.63	24.78	318	0.03
27	15.10	33.48	5.66	316	20	15.11	33.47	5.65	24.80	316	0.06
45	15.06	33.49	5.53	314	30	15.09	33.48	5.65	24.80	316	0.10
59	13.48	33.40	5.11	289	50	15.04	33.49	5.51	24.82	314	0.16
68	12.28	33.40	4.94	267	75	11.40	33.51	4.35	25.56	243	0.23
76	11.24	33.53	4.22	239	100	9.82	33.66	3.81	25.96	206	0.28
90	10.30	33.58	3.97	219	150	8.75	33.91	2.96	26.33	170	0.38
104	9.64	33.68	3.75	202	200	8.11	34.01	2.25	26.50	154	0.46
122	9.28	33.77	3.39	189	250	7.48	34.12	1.75	26.67	138	0.54
140	8.92	33.86	3.21	177	300	6.91	34.16	1.34	26.80	126	0.60
162	8.58	33.95	2.72	165	400	6.37	34.26	0.60	26.94	112	0.73
184	8.30	33.99	2.43	158	500	5.80	34.31	0.40	27.05	102	0.84
229	7.72	34.07	1.94	144							
300	6.91	34.16	1.34	126							
389	6.42	34.25	0.65	114							
506	5.78	34.31	0.39	101							

87.35 BLACK DOUGLAS; January 26, 1959; 0737 GCT; 33°50'N, 118°37.5'W; sounding, 250 fm; wind, 280°, force 4; weather, partly cloudy; sea, rough; wire angle, 00°.

0	15.78	33.49	5.35	329	0	15.78	33.49	5.35	24.66	329	0.00
9	15.78	33.51	5.26	328	10	15.77	33.51	5.26	24.67	328	0.03
27	15.70	33.51	5.31	326	20	15.74	33.51	5.29	24.69	326	0.06
45	15.58	33.51	5.38	324	30	15.68	33.51	5.33	24.69	326	0.10
68	13.74	33.51	4.55	286	50	15.35	33.51	5.34	24.78	318	0.16
91	12.59	33.57	3.93	260	75	13.42	33.52	4.36	25.18	279	0.24
113	11.36	33.64	3.78	232	100	12.03	33.60	3.89	25.50	249	0.30
150	10.22	33.86	2.73	197	150	10.22	33.86	2.73	26.05	197	0.42
185	9.53	33.96	2.39	178	200	9.23	34.02	2.22	26.33	170	0.51
231	8.70	34.13	1.85	153	250	8.48	34.13	1.77	26.55	150	0.59
276	8.24	34.14	1.70	146	300	8.04	34.15	1.59	26.63	142	0.67
372	7.44	34.23	1.03	128							

87.40 BLACK DOUGLAS; January 26, 1959; 1108 GCT; 33°40'N, 118°58.5'W; sounding, 400 fm; wind, 220°, force 2; weather, partly cloudy; sea, rough; wire angle, 06°.

2	15.64	33.51	5.48	325	0	(15.64)	(33.51)	(5.48)	(24.70)	(325)	(0.00)
10	15.64	33.51	5.49	325	10	15.64	33.51	5.49	24.70	325	0.03
29	15.60	33.53	5.59	322	20	15.63	33.52	5.56	24.72	324	0.06
38	15.42	33.49	5.54	322	30	15.59	33.53	5.57	24.74	322	0.10
47	14.92	33.51	5.40	310	50	14.60	33.50	5.28	24.93	304	0.16
56	13.98	33.49	5.00	292	75	12.95	33.49	4.76	25.26	272	0.23
65	13.36	33.49	4.87	280	100	11.02	33.61	3.99	25.71	229	0.30
78	12.78	33.49	4.74	269	150	9.69	33.82	3.16	26.11	191	0.40
91	11.57	33.58	4.08	241	200	8.79	34.03	2.08	26.42	162	0.49
105	10.80	33.62	3.94	225	250	8.25	34.12	1.64	26.57	148	0.57
128	10.14	33.66	3.60	211	300	7.87	34.16	1.33	26.66	140	0.65
155	9.59	33.85	3.05	188	400	7.20	34.23	0.77	26.81	125	0.78
186	8.98	33.98	2.29	169	500	6.34	34.31	0.47	26.98	108	0.90
232	8.42	34.11	1.76	151							
303	7.84	34.16	1.30	139							
394	7.24	34.23	0.79	126							
510	6.26	34.31	0.46	107							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{-5}T_3$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{-5}T_3$ 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; January 28, 1959; 1125 GCT; 33°30'N, 119°19'W; sounding, 900 fm; wind, 300°, force 6; weather, partly cloudy; sea, very rough; wire angle, 05°.											87.45
2	15.22	33.53		314	0	(15.22)	(33.53)		(24.82)	(314)	(0.00)
10	15.23	33.54		314	10	15.23	33.54		24.82	314	0.03
29	14.51	33.53		300	20	15.20	33.54		24.83	313	0.06
42	13.32	33.53		276	30	14.10	33.53		25.05	292	0.09
51	12.70	33.53		264	50	12.83	33.53		25.32	266	0.15
60	12.29	33.53		258	75	11.18	33.60		25.68	232	0.21
69	11.49	33.57		240	100	10.11	33.65		25.90	211	0.27
87	10.68	33.64		221	150	9.27	33.93		26.26	177	0.36
101	10.06	33.65		211	200	8.58	34.11		26.51	153	0.45
114	9.47	33.73		195	250	8.16	34.16		26.61	144	0.52
137	9.36	33.89		181	300	7.84	34.20		26.70	135	0.60
163	9.14	33.96		173	400	7.36	34.28		26.83	123	0.73
198	8.61	34.11		154	500	6.48	34.32		26.98	109	0.85
247	8.19	34.15		144							
323	7.72	34.23		132							
417	7.27	34.29		121							
547	6.02	34.35		101							
BLACK DOUGLAS; January 26, 1959; 1925, 1950 GCT; 33°12.5'N, 120°02'W; sounding, 400 fm; wind, 330°, force 8; weather, clear; sea, very high; wire angle, 45°, 35°.											87.55
3	14.55	33.43	5.56	308	0	(14.55)	(33.43)	(5.56)	(24.88)	(308)	(0.00)
10	14.56	33.42	5.57	309	10	14.56	33.42	5.57	24.87	309	0.03
23	14.56	33.46	5.57	306	20	14.56	33.45	5.57	24.89	307	0.06
42	14.44	33.42	5.54	306	30	14.55	33.44	5.55	24.90	306	0.09
48	14.39	33.40	4.91	307	50	14.37	33.40	4.89	24.90	306	0.15
55	13.57	33.40	4.82	291	75	11.40	33.50	4.15	25.56	244	0.22
64	12.40	33.47	4.39	264	100	10.26	33.64	3.47	25.87	214	0.28
					150	8.80	33.90	2.52	26.31	172	0.38
84	10.92	33.52	4.00	234	200	8.22	34.05	1.70	26.52	152	0.46
94	10.48	33.62	3.61	220	250	7.88	34.11	1.53	26.62	143	0.53
109	9.89	33.68	3.20	205	300						
124	9.32	33.80	2.77	187							
148	8.82	33.89	2.53	173							
166	8.64	33.94	1.89	167							
209	8.12	34.07	1.65	150							
278	7.76	34.13	1.48	140							
371u	7.32	34.14	1.31	133							
492	6.20	34.33	0.54	105							
BLACK DOUGLAS; January 28, 1959; 0152 GCT; 33°28.5'N, 117°47'W; sounding, 200 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.											90.28
0	15.98	33.53		330	0	15.98	33.53		24.65	330	0.00
9	15.70	33.53		324	10	15.67	33.53		24.72	324	0.03
27	15.48	33.55		318	20	15.55	33.54		24.75	320	0.06
68	13.03	33.63		264	30	15.42	33.55		24.78	318	0.10
90	11.83	33.68		238	50	14.50	33.58		25.00	296	0.16
114	10.94	33.75		217	75	12.60	33.65		25.44	255	0.23
149	9.70	33.94		183	100	11.43	33.70		25.71	229	0.29
186	9.18	34.05		167	150	9.68	33.94		26.20	183	0.39
231	8.52	34.15		149	200	8.95	34.08		26.43	161	0.48
276	8.12	34.22		138	250	8.32	34.20		26.62	143	0.56

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

90.30 BLACK DOUGLAS; January 28, 1959; 0015 GCT; 33°24.5'N, 117°55'W; sounding, 290 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 07°.

0	16.32	33.53		338	0	16.32	33.53		24.57	338	0.00
9	16.02	33.55		330	10	16.01	33.55		24.65	330	0.03
27	15.95	33.53		330	20	15.98	33.54		24.65	330	0.07
36	15.59	33.51		324	30	15.90	33.53		24.66	329	0.10
45	14.51	33.49		303	50	14.25	33.50		25.00	297	0.16
54	14.00	33.51		291	75	12.50	33.58		25.41	258	0.23
63	13.18	33.53		274	100	11.41	33.70		25.71	229	0.29
76	12.46	33.58		257	150	9.67	33.97		26.22	180	0.40
90	11.60	33.62		238	200	8.93	34.05		26.41	163	0.48
104	11.34	33.74		225	250	8.37	34.11		26.54	151	0.56
126	10.09	33.87		195	300	7.89	34.17		26.66	139	0.64
153	9.62	33.98		179	400	7.20	34.25		26.83	123	0.77
184	9.08	34.03		167	500	(6.52)	(34.33)		(26.98)	(108)	(0.89)
229	8.62	34.08		156							
274	8.11	34.14		144							
369	7.41	34.23		128							
459	6.80	34.30		115							

90.32 BLACK DOUGLAS; January 27, 1959; 2200 GCT; 33°20.5'N, 118°03'W; sounding, 450 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.

0	16.70	33.55	5.51	345	0	16.70	33.55	5.51	24.49	345	0.00
9	15.99	33.53	5.52	331	10	15.99	33.53	5.53	24.65	330	0.03
28	15.95	33.55	5.54	329	20	15.99	33.54	5.53	24.65	330	0.07
36	15.48	33.50	5.52	322	30	15.92	33.55	5.54	24.68	328	0.10
45	14.59	33.49	5.31	304	50	13.85	33.49	5.13	25.08	290	0.16
54	13.50	33.50	5.00	282	75	12.40	33.53	4.36	25.39	260	0.23
64	12.94	33.49	4.71	272	100	11.08	33.63	3.72	25.72	228	0.29
77	12.30	33.55	4.27	256	150	9.73	33.89	2.72	26.16	187	0.40
91	11.45	33.63	3.84	235	200	9.21	34.08	2.00	26.39	165	0.49
105	10.91	33.63	3.66	225	250	8.50	34.15	1.73	26.56	149	0.57
127	10.34	33.79	2.96	204	300	7.83	34.19	1.41	26.69	136	0.64
154	9.64	33.91	2.68	184	400	7.02	34.25	0.81	26.85	121	0.77
186	9.38	34.04	2.13	171	500	6.47	34.28	0.59	26.94	112	0.90
232	8.76	34.14	1.82	154							
305	7.76	34.20	1.35	134							
394	7.06	34.25	0.82	122							
512	6.41	34.28	0.58	111							

90.37 BLACK DOUGLAS; January 27, 1959; 1625 GCT; 33°10.5'N, 118°23.5'W; sounding, 650 fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 00°.

1	15.92	33.56	5.58	327	0	(15.92)	(33.56)	(5.58)	(24.68)	(327)	(0.00)
10	15.87	33.54	5.60	327	10	15.87	33.54	5.60	24.68	327	0.03
29	15.88	33.55	5.41	327	20	15.87	33.54	5.50	24.68	327	0.06
37	15.78	33.53	5.53	326	30	15.88	33.55	5.41	24.68	327	0.10
46	15.32	33.53	5.47	316	50	15.16	33.53	5.37	24.83	313	0.16
55	14.88	33.52	5.32	308	75	13.10	33.53	4.84	25.26	272	0.24
65	14.38	33.53	5.21	297	100	11.40	33.64	3.99	25.67	233	0.30
78	12.74	33.53	4.72	265	150	10.22	33.91	2.71	26.08	194	0.41
92	11.90	33.60	4.40	245	200	9.48	34.06	2.18	26.33	170	0.50
106	11.12	33.67	3.68	226	250	8.61	34.16	1.83	26.54	150	0.58
128	10.48	33.79	3.15	207	300	7.99	34.20	1.47	26.67	138	0.66
155	10.15	33.93	2.61	191	400	7.24	34.27	0.98	26.83	123	0.79
187	9.69	34.02	2.26	177	500	6.51	34.33	0.56	26.98	109	0.91
233	8.86	34.14	1.98	156							
305	7.95	34.20	1.43	137							
396	7.28	34.27	0.99	123							
514	6.40	34.34	0.50	106							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δ_{T_3}	Z	T	S	O_2	σ_t	δ_{T_3}	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

BLACK DOUGLAS; January 27, 1959; 1735 GCT;[a] 33°10.5'N, 118°23.5'W; sounding, 650 fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 00°. 90.37

0	15.90	33.55	5.57	327	0	15.90	33.55	5.57	24.68	327
9	15.86	33.55	5.57	326	10	15.86	33.55	5.57	24.69	326
18	15.86	33.55	5.40	326	20	15.86	33.55	5.40	24.69	326
28	15.86	33.51	5.53	329	30	15.82	33.52	5.53	24.67	328
37	15.40	33.53	5.54	318	50	14.92	33.51	5.34	24.86	310
45	15.08	33.51	5.36	313	75	13.00	33.56	4.77	25.29	269
54	14.80	33.51	5.34	307	100	11.28	33.67	3.66	25.71	229
64	14.27	33.51	5.13	296	150	10.10	33.91	2.75	26.10	192
73	13.16	33.53	4.86	273						
82	12.35	33.58	4.38	255						
91	11.67	33.60	4.08	241						
100	11.28	33.67	3.66	229						
109	11.12	33.78	3.04	218						
117	10.74	33.73	3.21	215						
126	10.61	33.78	3.04	210						
135	10.38	33.83	2.93	202						
180	9.68	34.04	2.28	176						

BLACK DOUGLAS; January 27, 1959; 1820 GCT;[b] 33°10.5'N, 118°23.5'W; sounding, 650 fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 00°. 90.37

124	10.74	33.77	3.02	212						
132	10.52	33.82	2.89	205						
141	10.32	33.86	2.83	199						
150	10.23	33.85	2.81	198						
159	10.12	33.94	2.46	190						
168	10.00	33.97	2.36	186						
177	9.83	33.98	2.30	182						
185	9.69	33.95	2.28	182	150	10.23	33.85	2.81	26.04	198
195	9.48	34.02	2.22	174	200	9.38	34.00	2.19	26.30	173
204	9.27	34.00	2.19	172	250	8.47	34.13	1.74	26.54	150
213	9.14	34.08	2.14	164						
222	8.98	34.07	2.05	162						
231	8.77	34.11	1.87	156						
240	8.58	34.14	1.81	151						
249	8.48	34.13	1.74	150						
257	8.34	34.13	1.74	148						
266	8.28	34.14	1.74	147						

BLACK DOUGLAS; January 27, 1959; 1916 GCT;[c] 33°10.5'N, 118°23.5'W; sounding, 650 fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 05°. 90.37

232	8.77	34.12	1.88	155						
249	8.54	34.11	1.83	152						
267	8.26	34.14	1.65	146						
284	8.06	34.13	1.53	144						
302	7.95	34.18	1.43	139						
320	7.80	34.20	1.30	135						
338	7.68	34.22	1.14	132						
356	7.52	34.25	0.98	128						
374	7.32	34.25	0.90	125						
391	7.21	34.27	0.78	122	250	8.53	34.11	1.82	26.52	152
409	7.15	34.31	0.68	118	300	7.96	34.17	1.45	26.66	139
428	6.98	34.29	0.62	118	400	7.18	34.31	0.69	26.87	119
445	6.80	34.27	0.57	117	500	6.37	34.34	0.46	27.01	106
454	6.62	34.31	0.55	112						
482	6.50	34.33	0.47	108						
499	6.38	34.34	0.46	106						
517	6.30	34.34	0.40	105						

a) Test cast, top.
b) Test cast, middle.
c) Test cast, bottom.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

90.45 BLACK DOUGLAS; January 27, 1959; 1152 GCT; 32°54.5'N, 118°56'W; sounding, 850 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°.

2	15.92	33.55	5.48	328	0	(15.92)	(33.55)	(5.48)	(24.67)	(328)	(0.00)
11	15.92	33.53	5.50	329	10	15.92	33.53	5.50	24.66	329	0.03
29	15.92	33.55	5.52	328	20	15.92	33.54	5.51	24.67	328	0.06
56	15.32	33.53	5.49	316	30	15.92	33.55	5.52	24.67	328	0.10
65	14.03	33.49	5.22	294	50	15.50	33.54	5.51	24.76	320	0.16
74	12.92	33.48	4.95	272	75	12.85	33.48	4.95	25.26	272	0.24
87	11.82	33.49	4.78	252	100	11.03	33.53	4.46	25.65	235	0.30
101	10.98	33.53	4.44	234	150	9.72	33.84	3.07	26.11	191	0.41
114	10.28	33.58	4.21	219	200	8.87	34.09	2.11	26.45	159	0.50
132	10.12	33.73	3.41	205	250	8.41	34.14	1.80	26.56	149	0.58
150	9.72	33.84	3.07	191	300	7.88	34.17	1.50	26.66	139	0.65
177	9.02	34.00	2.53	168	400	6.96	34.27	0.82	26.87	119	0.78
200	8.87	34.09	2.11	159	500	6.32	34.34	0.53	27.01	106	0.90
250	8.41	34.14	1.80	149							
326	7.60	34.20	1.30	133							
426	6.78	34.29	0.67	115							
552	6.00	34.37	0.49	100							

90.50 BLACK DOUGLAS; January 27, 1959; 0820 GCT; 32°44.5'N, 119°16.5'W; sounding, 150 fm; wind, 330°, force 5; weather, partly cloudy; sea, high; wire angle, 22°.

1	15.62	33.51	5.54	324	0	(15.62)	(33.51)	(5.54)	(24.71)	(324)	(0.00)
10	15.62	33.54	5.61	322	10	15.62	33.54	5.61	24.74	322	0.03
27	15.64	33.57	5.66	320	20	15.65	33.55	5.64	24.74	322	0.06
43	15.38	33.55	5.57	316	30	15.63	33.57	5.66	24.76	320	0.10
65	12.84	33.51	4.91	269	50	14.94	33.53	5.40	24.88	308	0.16

90.55 BLACK DOUGLAS; January 27, 1959; 0137 GCT; 32°35'N, 119°37'W; sounding, 600 fm; wind, 320°, force 8; weather, partly cloudy; sea, very high; wire angle, 38°.

2	15.66	33.62	5.50	318	0	(15.66)	(33.62)	(5.50)	(24.78)	(318)	(0.00)
10	15.66	33.55	5.50	322	10	15.66	33.55	5.50	24.74	322	0.03
26	15.70	33.57	5.42	322	20	15.69	33.56	5.46	24.74	322	0.06
34	15.67	33.53	5.44	324	30	15.68	33.55	5.43	24.72	323	0.10
44	15.64	33.55	5.39	322	50	15.18	33.55	5.22	24.84	312	0.16
51	14.94	33.55	5.14	307	75	11.50	33.53	4.21	25.56	244	0.23
58	12.38	33.53	4.43	259	100	9.88	33.70	3.63	25.98	204	0.29
87	10.26	33.58	3.77	219	150	8.63	33.91	2.68	26.35	168	0.38
98	9.93	33.69	3.65	205	200	8.16	34.06	1.20	26.54	150	0.46
115	9.50	33.76	3.31	193	250	7.60	34.15	1.37	26.68	136	0.54
142	8.72	33.87	3.06	173	300	7.23	34.20	1.27	26.78	128	0.60
167	8.50	33.98	1.56	162	400	6.72	34.23	0.76	26.87	119	0.73
209	8.07	34.09	1.19	147	500	(6.14)	(34.28)	(0.37)	(26.99)	(108)	(0.85)
272	7.40	34.18	1.41	132							
360	6.96	34.22	0.92	122							
485	6.21	34.27	0.42	110							

93.27 ORCA; January 20, 1959; 0053 GCT; 32°54.5'N, 117°22'W; sounding, 304 fm; wind, 150°, force 1; weather, overcast; sea, slight; wire angle, 01°.

1	15.84	33.55	-	326	0	(15.84)	(33.55)	(5.53)	(24.69)	(326)	(0.00)
11	15.84	33.51	5.53	329	10	15.84	33.52	(5.53)	24.66	329	0.03
31	15.72	33.51	5.51	327	20	15.83	33.51	5.52	24.66	329	0.06
51	14.08	33.46	4.93	297	30	15.74	33.51	5.51	24.68	327	0.10
76	12.67	33.50	4.18	267	50	14.15	33.46	4.97	24.99	298	0.16
101	11.90	33.66	3.51	241	75	12.70	33.50	4.20	25.31	267	0.23
126	10.76	33.71	3.41	217	100	11.92	33.66	3.53	25.58	241	0.30
166	9.68	33.96	2.43	181	150	9.92	33.83	2.93	26.06	196	0.41
206	9.41	34.07	1.90	169	200	9.46	34.05	2.00	26.32	171	0.50
256	8.88	34.16	1.63	154	250	8.95	34.16	1.66	26.48	156	0.58
308	8.24	34.17	1.46	144	300	8.34	34.17	1.48	26.59	146	0.66
413	7.08	34.24	0.89	123	400	7.22	34.23	0.96	26.80	126	0.80

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

93.30

ORCA; January 19, 1959; 2254 GCT; 32°50'N, 117°30'W; sounding, 370 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 00°.

0	16.20	33.53	5.49	335	0	16.20	33.53	5.49	24.60	335	0.00
10	16.18	33.54	5.50	334	10	16.18	33.54	5.50	24.61	334	0.03
30	16.16	33.52	5.57	335	20	16.17	33.53	5.53	24.61	334	0.07
40	15.76	33.48	5.50	329	30	16.16	33.52	5.57	24.60	335	0.10
50	15.05	33.46	5.31	316	50	15.05	33.46	5.31	24.80	316	0.16
60	14.14	33.51	4.82	294	75	13.30	33.59	4.10	25.26	272	0.24
70	13.52	33.54	4.28	280	100	11.78	33.68	3.55	25.62	237	0.30
85	12.36	33.62	3.97	252	150	10.57	33.85	2.60	25.98	204	0.42
100	11.78	33.68	3.55	237	200	9.47	34.04	2.08	26.31	172	0.51
115	11.61	33.78	2.90	227	250	8.86	34.11	1.80	26.47	157	0.59
140	10.79	33.85	2.61	208	300	8.31	34.18	1.42	26.60	144	0.67
170	10.14	33.89	2.53	194	400	7.24	34.23	0.91	26.80	126	0.81
206	9.35	34.06	2.01	169	500	6.38	34.26	0.60	26.94	112	0.94
256	8.80	34.12	1.77	156							
336	7.93	34.22	1.17	136							
436	6.88	34.23	0.77	121							
567	5.97	34.31	0.42	104							

93.40

ORCA; January 19, 1959; 1734, 1808 GCT; 32°32'N, 118°11.5'W; sounding, 854 fm; wind, 280°, force 1; weather, overcast; sea, moderate; wire angle, 04°, 05°.

2	16.23	33.49	5.50	339	0	(16.23)	(33.49)	(5.50)	(24.55)	(339)	(0.00)
12	16.24	33.51	5.59	338	10	16.24	33.51	5.57	24.56	338	0.03
32	16.14	33.50	5.56	336	20	16.22	33.51	5.58	24.57	338	0.07
57	15.60	33.47	5.56	327	30	16.16	33.50	5.57	24.58	336	0.10
67	14.96	33.44	5.49	316	50	15.82	33.48	5.56	24.64	331	0.17
77	14.28	33.44	5.63	302	75	14.42	33.44	5.57	24.91	305	0.25
					100	12.24	33.51	5.52	25.41	258	0.32
87	13.42	33.46	5.61	284	150	9.65	33.70	3.55	26.02	200	0.43
102	12.06	33.52	5.51	254	200	9.11	34.02	2.34	26.35	168	0.53
117	10.69	33.53	5.49	230	250	8.71	34.17	1.84	26.54	151	0.61
137	9.98	33.65	4.05	209	300	8.08	34.21	1.56	26.66	139	0.68
156	9.54	33.73	3.36	196	400	6.98	34.24	0.88	26.84	122	0.82
180	9.24	33.86	2.99	182	500	6.23	34.29	0.49	26.98	108	0.94
206	9.08	34.05	2.20	166							
255	8.66	34.18	1.80	149							
334	7.66	34.22	1.32	132							
434	6.68	34.25	0.67	116							
566	5.81	34.34	0.41	100							

93.50

ORCA; January 19, 1959; 1124 GCT; 32°11'N, 118°52'W; sounding, 730 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 07°.

1	16.42	33.50	5.43	342	0	(16.42)	(33.50)	(5.43)	(24.52)	(342)	(0.00)
11	16.42	33.51	5.66	342	10	16.42	33.51	5.65	24.52	342	0.03
31	16.43	33.51	5.41	342	20	16.42	33.51	5.54	24.52	342	0.07
42	16.37	33.50	5.50	341	30	16.43	33.51	5.42	24.52	342	0.10
51	15.94	33.49	5.58	332	50	15.97	33.49	5.57	24.61	334	0.17
62	15.60	33.52	5.61	323	75	14.20	33.47	5.36	24.98	298	0.25
70	14.52	33.47	5.38	305	100	12.64	33.57	5.14	25.38	261	0.32
85	13.66	33.48	5.33	286	150	9.42	33.65	3.88	26.02	200	0.44
100	12.64	33.57	5.14	261	200	8.61	33.98	2.35	26.41	163	0.53
116	11.38	33.49	4.80	244	250	7.98	34.11	1.80	26.60	145	0.61
140	9.74	33.59	4.15	210	300	7.39	34.13	1.52	26.70	135	0.68
169	9.00	33.78	3.30	184	400	6.63	34.18	0.95	26.85	121	0.81
203	8.57	34.00	2.28	161	500	6.15	34.29	0.53	26.99	108	0.93
253	7.94	34.11	1.77	144							
332	7.06	34.14	1.30	130							
432	6.47	34.22	0.73	116							
562	5.80	34.34	0.37	99							

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5901

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

93.60 ORCA; January 19, 1959; 0511 GCT; 31°51'N, 119°33'W; sounding, 1800 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 10°.

2	16.06	33.55	5.41	331	0	(16.06)	(33.55)	(5.41)	(24.64)	(331)	(0.00)
12	16.06	33.57	5.62	330	10	16.06	33.57	5.59	24.65	330	0.03
32	16.06	33.55	5.64	331	20	16.06	33.56	5.62	24.65	330	0.07
47	15.54	33.56	5.48	319	30	16.06	33.55	5.63	24.64	331	0.10
57	13.70	33.54	4.84	283	50	15.00	33.55	5.31	24.87	309	0.16
68	12.15	33.57	4.20	252	75	11.58	33.59	3.99	25.59	240	0.23
78	11.30	33.60	3.89	234	100	9.99	33.70	3.40	25.96	206	0.29
96	10.01	33.68	3.41	207	150	8.92	33.90	2.78	26.29	174	0.38
112	9.65	33.73	3.38	198	200	8.38	34.03	2.19	26.48	156	0.47
127	9.28	33.81	8.12	186	250	7.69	34.12	1.70	26.65	140	0.54
151	8.92	33.90	2.77	174	300	7.11	34.18	1.30	26.78	128	0.61
179	8.64	33.99	2.44	164	400	6.40	34.24	0.76	26.93	114	0.74
216	8.16	34.05	1.99	142	500	5.79	34.30	0.55	27.05	102	0.85
270	7.41	34.15	1.55	134	600	5.18	34.37	0.42	27.17	90	0.95
353	6.75	34.22	0.92	120							
456	6.04	34.28	0.62	106							
602	5.17	34.37	0.41	90							

93.70 ORCA; January 18, 1959; 2306, 2342 GCT; 31°31'N, 129°15'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 23°, 27°.

2	16.49	33.44	5.44	349	0	(16.49)	(33.44)	(5.44)	(24.45)	(349)	(0.00)
11	16.52	33.44	5.58	349	10	16.51	33.44	5.57	24.45	349	0.03
30	16.46	33.42	5.54	349	20	16.49	33.43	5.56	24.45	349	0.07
57	16.48	33.49	5.47	344	30	16.46	33.42	5.54	24.45	349	0.10
67	16.23	33.52	5.54	337	50	16.47	33.45	5.50	24.47	347	0.17
75	14.98	33.40	5.54	319	75	14.98	33.40	5.54	24.76	319	0.26
88	14.06	33.57	5.48	288	100	12.76	33.55	5.17	25.34	264	0.33
101	12.74	33.55	5.16	264	150	9.69	33.69	4.33	26.00	202	0.45
114	11.50	33.54	4.88	242	200	8.63	33.89	3.27	26.33	170	0.54
130	10.66	33.61	4.79	223	250	7.93	34.04	2.18	26.56	149	0.63
147	9.82	33.68	4.41	204	300	7.50	34.10	1.75	26.66	139	0.70
173	9.02	33.80	3.73	183	400	6.47	34.18	1.02	26.87	119	0.84
					500	5.75	34.24	0.58	27.01	106	0.95
195	8.70	33.87	3.38	173							
244	8.00	34.03	2.24	150							
323	7.28	34.13	1.54	134							
426	6.22	34.20	0.87	115							
562	5.53	34.29	0.41	100							

93.80 ORCA; January 18, 1959; 1803 GCT; 31°07.5'N, 120°55'W; sounding, 2000 fm; wind, 280°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°.

2	17.10	33.69	5.37	344	0	(17.10)	(33.69)	(5.37)	(24.50)	(344)	(0.00)
12	17.09	33.68	5.52	344	10	17.09	33.68	5.50	24.50	344	0.03
31	17.09	33.68	5.46	344	20	17.09	33.68	5.40	24.50	344	0.07
61	17.10	33.69	5.46	344	30	17.09	33.68	5.47	24.50	344	0.10
70	17.10	33.71	5.42	342	50	17.09	33.69	5.46	24.50	344	0.17
80	17.09	33.70	5.47	342	75	17.10	33.70	5.45	24.52	342	0.26
94	15.08	33.65	5.54	303	100	14.62	33.64	5.47	25.03	294	0.34
109	14.03	33.64	5.37	283	150	10.62	33.56	4.57	25.74	226	0.47
123	12.50	33.58	5.06	257	200	9.00	33.83	3.30	26.22	181	0.57
142	10.86	33.53	4.67	232	250	8.13	34.00	2.47	26.50	155	0.66
161	10.30	33.60	4.42	218	300	7.41	34.08	2.00	26.66	139	0.74
190	9.30	33.78	3.58	189	400	6.32	34.16	1.20	26.87	119	0.87
213	8.70	33.89	3.01	172	500	5.74	34.26	0.57	27.03	104	0.99
265	7.92	34.04	2.28	149	600	(5.19)	(34.32)		(27.13)	(94)	(1.09)
345	6.82	34.11	1.67	129							
452	6.00	34.23	0.73	110							
589	5.27	34.32	0.40	95							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; January 18, 1959; 1144 GCT; 30°47'N, 121°33'W; sounding, 2000+ fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 12°. 93.90

1	17.06	33.68	5.35	343	0	(17.06)	(33.68)	(5.35)	(24.51)	(343)	(0.00)
11	17.06	33.68	5.45	343	10	17.06	33.68	5.44	24.51	343	0.03
31	17.08	33.69	5.33	343	20	17.06	33.68	5.40	24.51	343	0.07
60	17.26	33.78	5.37	341	30	17.07	33.68	5.34	24.51	343	0.10
70	17.18	33.78	5.38	339	50	17.22	33.75	5.36	24.52	342	0.17
81	15.58	33.66	5.56	313	75	16.70	33.74	5.44	24.64	331	0.26
97	14.12	33.49	5.46	295	100	13.84	33.51	5.42	25.09	288	0.34
111	12.82	33.58	5.22	263	150	10.29	33.68	4.74	25.89	212	0.46
127	11.62	33.62	4.88	239	200	8.81	33.83	3.28	26.25	178	0.56
147	10.51	33.67	4.80	216	250	7.97	33.99	2.50	26.51	153	0.64
167	9.34	33.73	3.97	193	300	7.32	34.08	1.78	26.67	138	0.72
197	8.88	33.82	3.30	179	400	6.37	34.17	1.14	26.87	119	0.85
222	8.40	33.91	3.11	166	500	5.74	34.24	0.57	27.02	106	0.97
276	7.62	34.05	2.03	144	600	5.23	34.30	0.44	27.12	95	1.08
360	6.71	34.14	1.37	127							
468	5.93	34.22	0.67	109							
608	5.20	34.31	0.42	94							

ORCA; January 15, 1959; 1212 GCT; 32°15'N, 117°08'W; sounding, 33 fm; wind, 310°, force 3; weather, partly cloudy; sea, slight; wire angle, 04°. 97.30

1	15.82	33.55	5.41	326	0	(15.82)	(33.55)	(5.41)	(24.69)	(326)	(0.00)
11	15.81	33.57	5.54	324	10	15.81	33.57	5.54	24.71	324	0.03
31	14.69	33.56	4.93	302	20	15.80	33.57	5.53	24.72	324	0.06
51	14.14	33.61	4.50	287	30	14.78	33.56	5.00	24.93	303	0.10
					50	14.15	33.61	4.51	25.10	287	0.16

SPENCER F. BAIRD; January 7, 1959; 0358 GCT;[a] 32°15.5'N, 117°14.5'W; sounding, 540 fm; wind, 360°, force 2; weather, clear; sea, rough; wire angle, 00°. 97.32

419	7.18	34.19	128
428	7.10	34.25	122
437	7.02	34.23	123
445	6.94	34.24	122
454	6.93	34.24	121
464	6.88	34.25	119
474	6.81	34.27	117
483	6.76	34.23	119
493	6.67	34.26	116
502	6.65	34.29	113
511	6.65	34.29	113
521	6.57	34.27	114
530	6.44	34.26	113
540	6.41	34.31	109
549	6.37	34.29	110
559	6.37	34.27	111
569	6.34	34.32	107

ORCA; January 15, 1959; 1412 GCT;[b] 32°11.5'N, 117°16.5'W; sounding, 700 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 02°. 97.32

0	16.08	33.58	5.49	329	0	16.08	33.58	5.49	24.66	329
10	16.10	33.57	5.59	330	10	16.10	33.57	5.59	24.65	330
20	16.08	33.56	5.58	330	20	16.08	33.56	5.58	24.65	330
30	15.98	33.58	5.45	326	30	15.98	33.58	5.45	24.68	326
40	15.50	33.60	5.26	315	50	15.24	33.62	4.99	24.87	308
50	15.24	33.62	4.99	308	75	13.62	33.64	4.32	25.24	274
60	14.34	33.62	4.57	290	100	11.94	33.68	3.76	25.59	240
70	13.84	33.64	4.39	278	150	10.08	33.99	3.42	26.17	186
81	13.40	33.65	4.21	269	200	9.51	34.15	1.91	26.40	164
91	12.02	33.66	3.89	243						
101	11.94	33.68	3.75	240						
121	11.42	33.77	3.21	225						
132	10.76	33.82	3.06	208						
142	10.44	33.95	2.46	194						
152	10.04	34.00	2.41	184						
203	9.48	34.16	1.89	163						

a) Test cast.
b) Test cast, top.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
97.32	ORCA; January 15, 1959; 1504 GCT;[a] 32°11.5'N, 117°16.5'W; sounding, 700 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 07°.										
138	10.76	33.91	2.60	202							
147	10.26	33.95	2.59	191							
157	9.98	34.00	2.39	183							
166	9.84	34.08	2.16	175							
176	9.72	34.09	2.16	172							
186	9.45	34.13	2.05	165							
196	9.48	34.14	1.90	165							
205	9.53	34.14u	1.84		150	10.13	33.97	2.55	26.14	188	
215	9.46	34.14	1.81	164	200	9.51	34.14	1.87	26.39	165	
235	9.22	34.18	1.69	158	250	9.16	34.21	1.58	26.50	154	
244	9.20	34.19	1.64	157							
254	9.12	34.23	1.56	153							
264	8.96	34.23	1.51	150							
274	8.98	34.31	1.28	144							
284	8.56	34.23	1.41	144							
294	8.52	34.24	1.29	142							
97.32	ORCA; January 15, 1959; 1550 GCT;[b] 32°11.5'N, 117°16.5'W; sounding, 700 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 06°.										
259	9.13	34.22	1.34	154							
278	8.90	34.25	1.28	148							
299	8.48	34.23	1.28	143							
317	8.45	34.24	1.27	142							
336	8.35	34.25	1.13	140							
355	7.90	34.23	1.11	135							
376	7.74	34.25	1.02	131							
396	7.43	34.22	0.91	129							
416	7.00	34.23	0.80	123							
435	6.87	34.23	0.80	121							
455	6.81	34.23	0.74	120	300	8.46	34.23	1.28	26.62	143	
475	6.58	34.25	0.63	115	400	7.33	34.22	0.89	26.78	128	
495	6.41	34.27	0.49	112	500	6.38	34.27	0.48	26.95	112	
535	6.14	34.28	0.40	108							
556	6.02	34.31	0.37	104							
576	5.88	34.34	0.34	100							
97.32	ORCA; January 15, 1959; 1647 GCT; 32°11.5'N, 117°16.5'W; sounding, 700 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.										
0	16.1	33.58	-	330	0	16.1	33.58	(5.53)	24.65	330	0.00
10	16.07	33.58	5.53	329	10	16.07	33.58	5.53	24.66	329	0.03
30	15.99	33.58	5.53	327	20	16.04	33.58	5.53	24.66	329	0.06
39	15.59	33.61	5.21	316	30	15.99	33.58	5.53	24.68	327	0.10
49	15.38	33.60	5.12	313	50	15.35	33.60	5.12	24.84	312	0.16
59	15.18	33.60	4.96	308	75	13.87	33.62	4.47	25.17	280	0.24
70	14.14	33.63	4.59	285	100	11.91	33.63	3.85	25.57	243	0.30
84	13.51	33.62	4.25	274	150	10.77	34.00	2.49	26.06	196	0.42
98	11.99	33.63	3.89	244	200	9.54	34.12	1.89	26.36	167	0.51
113	11.64	33.70	3.50	233	250	9.22	34.22	1.51	26.49	155	0.59
138	10.81	33.87	2.63	206	300	8.73	34.26	1.30	26.60	145	0.67
167	10.00	34.00	2.29	184	400	7.27	34.25	0.86	26.80	125	0.81
202	9.53	34.12	1.88	167	500	6.34	34.27	0.58	26.96	111	0.93
251	9.21	34.22	1.50	155							
331	8.38	34.26	1.16	139							
430	6.85	34.24	0.76	120							
560	6.02	34.31	0.47	104							

a) Test cast, middle.
b) Test cast, bottom.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

97.40

ORCA; January 17, 1959; 0112 GCT; 31°52'N, 117°46'W; sounding, 378 fm; wind, 310°, force 5; weather, partly cloudy; sea, moderate; wire angle, 11°.

1	16.32	33.56	5.48	336	0	(16.32)	(33.56)	(5.48)	(24.59)	(336)	(0.00)
11	16.33	33.55	5.48	336	10	16.33	33.55	5.48	24.59	336	0.03
31	16.15	33.53	5.43	335	20	16.30	33.54	5.47	24.59	336	0.07
61	14.74	33.53	4.80	305	30	16.16	33.53	5.44	24.60	335	0.10
70	14.08	33.53	4.67	292	50	15.75	33.53	5.24	24.70	326	0.17
80	13.80	33.58	4.50	282	75	13.93	33.55	4.58	25.10	287	0.24
90	12.40	33.62	4.02	253	100	12.02	33.62	3.92	25.54	245	0.31
109	11.78	33.66	3.85	238	150	10.26	33.80	3.08	26.00	202	0.42
125	11.16	33.69	3.44	226	200	9.48	34.06	2.20	26.33	170	0.52
144	10.38	33.78	3.17	206	250	8.89	34.17	1.76	26.50	154	0.60
163	10.02	33.86	2.80	194	300	8.23	34.21	1.40	26.64	141	0.68
192	9.60	34.04	2.26	174	400	6.94	34.21	0.94	26.83	123	0.82
215	9.25	34.09	2.09	165	500	6.30	34.28	0.57	26.97	110	0.94
270	8.70	34.20	1.59	148	600	5.71	34.34	0.36	27.09	98	1.05
353	7.40	34.20	1.11	130							
462	6.52	34.25	0.68	114							
601	5.70	34.34	0.35	98							

97.50

ORCA; January 17, 1959; 0752 GCT; 31°30'N, 118°35.5'W; sounding, 1300 fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 08°.

1	16.48	33.51	5.46	343	0	(16.48)	(33.51)	(5.46)	(24.51)	(343)	(0.00)
11	16.50	33.53	5.45	342	10	16.50	33.53	5.45	24.52	342	0.03
31	16.44	33.51	5.46	342	20	16.48	33.52	5.46	24.52	342	0.07
61	16.19	33.52	5.45	336	30	16.45	33.51	5.46	24.52	342	0.10
71	15.96	33.49	5.46	333	50	16.31	33.52	5.45	24.56	339	0.17
81	14.80	33.48	5.47	310	75	15.50	33.47	5.46	24.69	326	0.25
96	13.03	33.51	5.15	272	100	12.70	33.50	5.06	25.31	267	0.33
111	11.96	33.48	4.88	255	150	9.80	33.65	4.08	25.95	206	0.45
126	10.64	33.54	4.52	228	200	8.63	33.88	2.89	26.32	171	0.54
145	9.99	33.61	4.22	213	250	8.03	34.02	2.26	26.52	152	0.63
165	9.22	33.75	3.59	190	300	7.52	34.10	1.65	26.66	139	0.70
194	8.70	33.86	2.95	174	400	6.82	34.19	0.93	26.83	123	0.84
219	8.44	33.94	2.71	164	500	6.10	34.28	0.53	26.99	108	0.96
272	7.76	34.06	1.89	145	600	5.68	34.32	0.40	27.08	99	1.07
355	7.16	34.14	1.23	131							
464	6.31	34.26	0.60	111							
604	5.66	34.32	0.38	99							

97.60

ORCA; January 17, 1959; 1415 GCT; 31°08'N, 119°22'W; sounding, 1800 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 03°.

0	16.67	33.55	5.56	344	0	16.67	33.55	5.56	24.50	344	0.00
10	16.68	33.57	5.61	343	10	16.68	33.57	5.61	24.51	343	0.03
30	16.68	33.57	5.50	343	20	16.68	33.57	5.55	24.51	343	0.07
55	16.64	33.55	5.41	344	30	16.68	33.57	5.50	24.51	343	0.10
65	16.62	33.56	5.64	342	50	16.66	33.55	5.43	24.50	344	0.17
75	16.38	33.55	5.45	338	75	16.38	33.55	5.45	24.56	338	0.26
85	15.00	33.53	5.66	310	100	13.45	33.51	5.38	25.17	281	0.34
101	13.32	33.51	5.33	278	150	10.14	33.58	4.36	25.84	216	0.46
115	11.74	33.51	4.81	249	200	8.88	33.85	3.26	26.26	177	0.56
135	10.68	33.55	4.60	228	250	8.52	34.03	2.33	26.46	158	0.64
155	10.00	33.61	4.28	212	300	7.73	34.09	1.75	26.62	143	0.72
181	9.24	33.77	3.71	189	400	6.85	34.23	0.88	26.85	121	0.86
206	8.80	33.87	3.15	175	500	6.24	34.32	0.44	27.00	106	0.98
256	8.43	34.04	2.24	156							
336	7.28	34.13	1.43	134							
436	6.64	34.27	0.62	115							
567	5.80	34.36	0.31	98							

SIO

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
97.70	ORCA; January 17, 1959; 1828 GCT; 30°52.5'N, 119°52'W; sounding, 1918 fm; wind, 260°, force 2; weather, clear; sea, slight; wire angle, 03°.										
0	16.52	33.44	5.50	349	0	16.52	33.44	5.50	24.45	349	0.00
10	16.42	33.46	5.49	346	10	16.42	33.46	5.49	24.48	346	0.03
55	16.36	33.45	5.59	344	20	(16.40)	(33.46)	(5.50)	(24.49)	(345)	(0.07)
65	16.21	33.43	5.55	343	30	(16.38)	(33.46)	(5.52)	(24.49)	(345)	(0.10)
75	15.60	33.44	5.69	329	50	(16.36)	(33.45)	(5.57)	(24.50)	(344)	(0.17)
85	14.80	33.44	5.62	312	75	15.60	33.44	5.69	24.66	329	(0.26)
100	14.48	33.68	5.40	288	100	14.48	33.68	5.40	25.09	288	(0.34)
115	13.28	33.65	5.17	267	150	10.18	33.56	4.37	25.82	219	(0.46)
135	10.84	33.53	4.57	232	200	8.64	33.88	3.10	26.32	171	(0.56)
155	10.00	33.58	4.29	214	250	7.92	33.99	2.45	26.52	153	(0.64)
180	9.04	33.80	3.71	183	300	7.42	34.07	2.04	26.65	140	(0.72)
205	8.55	33.89	2.98	169	400	6.43	34.15	1.10	26.85	121	(0.86)
256	7.86	34.00	2.39	151	500	5.63	34.23	0.57	27.01	106	(0.98)
335	7.09	34.11	1.71	133							
437	6.04	34.17	0.79	115							
568	5.32	34.31	0.40	96							
97.80	ORCA; January 17, 1959; 2305, 2339 GCT; 30°34.5'N, 120°24'W; sounding, 2100 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 15°, 22°.										
1	17.06	33.62	5.53	348	0	(17.06)	(33.62)	(5.53)	(24.46)	(348)	(0.00)
10	17.05	33.64	5.50	346	10	17.05	33.64	5.50	24.48	346	0.03
30	16.90	33.61	5.50	345	20	16.95	33.62	5.50	24.48	346	0.07
59	16.91	33.62	5.51	344	30	16.90	33.61	5.50	24.49	345	0.10
69	16.90	33.62	5.52	344	50	16.90	33.62	5.50	24.50	344	0.17
79	16.86	33.60	5.49	345	75	16.88	33.61	5.50	24.49	345	0.26
94	15.56	33.64	5.64	314	100	14.90	33.64	5.54	24.97	300	0.34
107	13.72	33.63	5.30	277	150	10.81	33.58	4.44	25.72	228	0.47
123	12.34	33.57	4.89	256	200	9.39	33.86	3.23	26.18	184	0.58
142	11.06	33.57	4.50	233	250	8.38	34.01	2.80	26.46	158	0.66
161	10.53	33.60	4.36	222	300	7.71	34.10	2.05	26.64	141	0.74
189	9.46	33.82	3.42	188	400	6.74	34.22	0.95	26.87	119	0.88
212	9.32	33.89	3.10	181	500	6.04	34.29	0.57	27.01	106	1.00
255	8.29	34.04	2.72	154							
334	7.32	34.14	1.56	133							
439	6.46	34.26	0.71	113							
579	5.54	34.33	0.42	97							
97.90	ORCA; January 18, 1959; 0544 GCT; 30°14'N, 121°10'W; sounding, 2000 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.										
1	17.11	33.69	5.38	344	0	(17.11)	(33.69)	(5.38)	(24.50)	(344)	(0.00)
11	17.12	33.67	5.40	345	10	17.12	33.67	5.40	24.49	345	0.03
31	17.11	33.68	5.40	345	20	17.11	33.67	5.40	24.49	345	0.07
61	17.12	33.69	5.41	344	30	17.11	33.68	5.40	24.50	344	0.10
70	17.22	33.74	5.39	343	50	17.11	33.68	5.40	24.50	344	0.17
80	17.30	33.78	5.41	342	75	17.27	33.76	5.40	24.52	342	0.26
95	15.68	33.60	5.60	319	100	15.00	33.58	5.56	24.90	306	0.34
111	14.62	33.67	5.47	292	150	11.50	33.59	4.63	25.60	239	0.48
124	13.90	33.69	5.33	276	200	9.25	33.77	3.76	26.14	189	0.59
145	11.90	33.58	4.75	246	250	8.35	33.99	2.77	26.45	159	0.68
164	10.50	33.62	4.27	220	300	7.80	34.08	2.18	26.61	144	0.76
194	9.43	33.75	3.62	193	400	6.72	34.19	1.12	26.84	122	0.90
218	8.72	33.89	3.15	172	500	6.00	34.27	0.60	27.00	107	1.02
273	8.10	34.04	2.49	152	600	5.53	34.34	0.37	27.12	96	1.12
357	7.14	34.14	1.47	131							
468	6.18	34.25	0.75	110							
608	5.50	34.35	0.33	95							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m

ORCA; January 15, 1959; 0537 GCT; 31°41.5'N, 116°47'W; sounding, 250 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 13°. 100.30

1	16.14	33.61	5.85	328	0	(16.14)	(33.61)	(5.85)	(24.67)	(328)	(0.00)
11	16.16	33.60	5.69	329	10	16.15	33.60	5.70	24.66	329	0.03
31	15.30	33.61	5.07	310	20	15.90	33.60	5.49	24.72	324	0.06
50	14.42	33.60	4.54	293	30	15.37	33.61	5.11	24.84	312	0.10
74	12.87	33.63	4.11	261	50	14.42	33.60	4.54	25.04	293	0.16
99	11.92	33.66	3.73	241	75	12.85	33.63	4.08	25.38	260	0.23
123	11.21	33.81	2.98	218	100	11.91	33.66	3.72	25.59	240	0.29
161	10.06	34.04	2.15	182	150	10.37	33.99	2.34	26.12	190	0.40
198	9.70	34.09	1.94	172	200	9.68	34.09	1.93	26.32	171	0.49
246	9.21	34.16	1.61	159	250	9.17	34.16	1.59	26.46	158	0.58
293	8.67	34.20	1.46	148	300	8.58	34.20	1.44	26.58	147	0.66
394	7.48	34.20	1.09	131	400	(7.43)	(34.20)	(1.07)	(26.75)	(131)	(0.80)

ORCA; January 14, 1959; 2308 GCT; 31°22'N, 117°28'W; sounding, 975 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 22°. 100.40

0	16.5	33.56	-	340	0	16.5	33.56	(5.48)	24.54	340	0.00
9	16.49	33.57	5.48	338	10	16.49	33.57	5.48	24.56	338	0.03
28	16.50	33.58	5.49	338	20	16.49	33.57	5.48	24.56	338	0.07
42	16.42	33.62	5.37	334	30	16.50	33.58	5.47	24.56	338	0.10
51	15.64	33.50	5.46	326	50	15.75	33.51	5.44	24.68	327	0.17
60	14.72	33.48	5.50	308	75	14.10	33.52	5.18	25.05	292	0.24
69	14.42	33.49	5.37	301	100	11.74	33.55	4.42	25.53	246	0.31
87	12.83	33.56	4.63	265	150	10.34	33.92	2.72	26.07	195	0.42
100	11.74	33.55	4.42	246	200	9.50	34.03	2.26	26.29	174	0.52
113	11.08	33.64	3.82	228	250	8.80	34.18	1.60	26.54	151	0.60
134	10.64	33.87	2.84	204	300	8.14	34.22	1.28	26.66	139	0.68
158	10.18	33.93	2.66	192	400	7.16	34.27	0.77	26.85	121	0.81
193	9.62	34.01	2.34	176	500	6.32	34.31	0.48	26.98	108	0.93
240	8.93	34.17	1.69	154							
315	7.94	34.23	1.18	135							
412	7.06	34.28	0.71	120							
550	5.89	34.34	0.36	100							

ORCA; January 14, 1959; 1555 GCT; 31°02.5'N, 118°13'W; sounding, 950 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 06°. 100.50

0	17.0	33.66	-	346	0	17.0	33.66	(5.39)	24.48	346	0.00
10	16.96	33.64	5.39	344	10	16.96	33.64	5.39	24.50	344	0.03
30	16.97	33.64	5.44	344	20	16.96	33.64	5.42	24.50	344	0.07
45	16.96	33.66	5.43	343	30	16.97	33.64	5.44	24.50	344	0.10
54	15.24	33.49	5.33	318	50	16.82	33.65	5.42	24.54	340	0.17
65	14.04	33.58	4.65	287	75	13.16	33.58	4.33	25.28	270	0.25
75	13.16	33.58	4.33	270	100	11.96	33.62	4.13	25.54	245	0.31
96	12.15	33.60	4.20	250	150	10.18	33.75	3.35	25.96	205	0.42
110	11.37	33.63	3.84	233	200	8.94	34.00	2.30	26.36	167	0.52
126	10.50	33.69	3.70	214	250	8.41	34.12	1.77	26.54	150	0.60
150	10.18a)	33.75	3.35	205	300	8.04	34.20	1.41	26.66	139	0.68
180	9.32	33.95	2.45	176	400	7.11	34.25	0.94	26.84	122	0.81
219	8.66	34.04	2.17	160	500	6.52	34.36	0.50	27.00	107	0.93
275	8.29	34.17	1.56	145	600	5.73	34.37	0.43	27.11	96	1.04
359	7.40	34.22	1.17	129							
464	6.76	34.33	0.55	112							
610	5.67	34.37	0.43	95							

a) Alternate value, 9.96°C, not used in interpolation.

SIO

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5901

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
100.60	ORCA; January 14, 1959; 0830 GCT; 30°44'N, 118°49'W; sounding, 1560 fm; wind, 280°, force 5; weather, overcast; sea, rough; wire angle, 20°.										
0	17.2	33.74	-	342	0	17.2	33.74	(5.47)	24.52	342	0.00
9	17.18	33.75	5.47	341	10	17.17	33.75	5.46	24.54	341	0.03
28	17.08	33.73	5.43	340	20	17.12	33.74	5.44	24.54	341	0.07
57	16.24	33.64	5.06	329	30	17.07	33.13	5.42	24.54	340	0.10
66	15.22	33.58	4.86	311	50	16.82	33.70	5.32	24.58	337	0.17
75	14.12	33.54	4.66	291	75	14.12	33.54	4.66	25.06	291	0.25
89	13.12	33.61	4.28	267	100	12.37	33.62	4.22	25.46	253	0.32
104	12.02	33.62	4.20	246	150	9.70	33.84	3.02	26.12	190	0.43
118	10.94	33.63	3.82	226	200	8.86	34.04	2.26	26.41	163	0.52
137	10.21	33.73	3.36	207	250	8.44	34.17	2.14	26.58	147	0.60
156	9.50	33.87	2.91	185	300	7.93	34.21	1.55	26.69	136	0.67
182	9.08	33.96	2.60	172	400	6.83	34.26	0.76	26.88	118	0.80
205	8.82	34.06	2.20	161	500	6.07	34.32	0.52	27.03	104	0.92
258	8.38	34.18	2.13	145							
337	7.48	34.22	1.03	130							
442	6.48	34.29	0.64	111							
579	5.64	34.34	0.35	98							
100.70	ORCA; January 14, 1959; 0140 GCT; 30°23'N, 119°38'W; sounding, 2000 fm; wind, 350°, force 4; weather, overcast; sea, moderate; wire angle, 10°.										
0	16.8	33.55	-	347	0	16.8	33.55	(5.47)	24.47	347	0.00
10	16.80	33.55	5.47	347	10	16.80	33.55	5.47	24.47	347	0.03
30	16.76	33.54	5.52	347	20	16.78	33.54	5.50	24.47	347	0.07
60	16.72	33.56	5.51	344	30	16.76	33.54	5.52	24.47	347	0.10
70	16.72	33.57	5.44	344	50	16.72	33.55	5.51	24.49	345	0.17
80	16.69	33.57	5.49	344	75	16.72	33.57	5.47	24.50	344	0.26
96	15.50	33.60	5.59	315	100	15.40	33.62	5.48	24.85	311	0.34
109	14.62	33.64	5.44	294	150	10.85	33.56	4.53	25.70	230	0.48
125	12.92	33.56	5.06	266	200	8.93	33.82	3.08	26.23	180	0.58
144	11.26	33.55	4.66	238	250	8.24	34.04	2.22	26.50	154	0.67
164	10.10	33.60	4.17	215	300	7.60	34.11	1.55	26.66	139	0.75
192	9.08	33.77	3.29	186	400	6.75	34.20	0.65	26.85	121	0.88
216	8.72	33.91	2.76	170	500	6.28	34.29	0.52	26.98	109	1.00
270	7.98	34.07	1.97	147	600	5.63	34.36	0.37	27.11	96	1.11
352	7.06	34.16	0.86	129							
461	6.50	34.27	0.56	113							
602	5.61	34.36	0.36	96							
100.80	ORCA; January 13, 1959; 2019 GCT; 30°08'N, 120°09'W; sounding, 1960 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.										
0	17.1	33.59	-	351	0	17.1	33.59	(5.43)	24.43	351	0.00
10	16.98	33.58	5.43	349	10	16.98	33.58	5.43	24.45	349	0.04
30	16.88	33.58	5.44	347	20	16.93	33.58	5.44	24.46	348	0.07
60	16.75	33.55	5.39	346	30	16.88	33.58	5.44	24.47	347	0.10
70	16.42	33.57	5.47	337	50	16.77	33.56	5.40	24.48	346	0.17
80	15.24	33.55	5.52	314	75	15.75	33.56	5.51	24.72	324	0.26
95	13.62	33.55	5.09	281	100	13.18	33.54	5.00	25.25	273	0.33
110	12.41	33.53	4.80	260	150	9.79	33.70	3.78	25.99	203	0.45
124	11.34	33.61	4.37	237	200	8.99	33.99	2.40	26.34	169	0.55
144	9.94	33.69	3.90	206	250	8.43	34.07	1.77	26.49	155	0.63
164	9.52	33.73	3.45	196	300	7.83	34.11	1.30	26.62	143	0.71
194	9.06	33.96	2.50	172	400	7.04	34.24	0.82	26.84	122	0.84
219	8.85	34.07	2.08	160	500	6.15	34.29	0.51	26.99	108	0.96
273	8.08	34.06	1.50	150	600	5.62	34.36	0.32	27.11	96	1.07
358	7.44	34.22	1.00	129							
467	6.42	34.27	0.60	112							
607	5.60	34.36	0.29	95							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m	

100.90

ORCA; January 13, 1959; 1454, 1523 GCT; 29°50'N, 120°52'W; sounding, 2100 fm; wind, 360°, force 2; weather, drizzle; sea, moderate; wire angle, 08°, 10°.

0	17.24	33.67	5.33	348	0	17.24	33.67	5.33	24.46	348	0.00
10	17.27	33.64	5.38	351	10	17.27	33.64	5.38	24.43	351	0.03
30	17.56	33.79	5.41	347	20	17.37	33.70	5.39	24.45	349	0.07
41	17.56	33.80	5.33	346	30	17.56	33.79	5.41	24.47	347	0.10
51	17.62	33.82	5.34	346	50	17.61	33.82	5.34	24.48	346	0.17
61	17.70	33.86	5.34	345	75	17.30	33.86	5.44	24.59	336	0.26
71	17.70	33.89	5.37	343	100	15.20	33.82	5.49	25.04	293	0.34
85	15.86	33.80	5.56	308	150	10.35	33.60	4.46	25.82	218	0.47
100	15.20	33.82	5.49	293	200	9.05	33.80	3.74	26.19	184	0.57
114	14.22	33.78	5.22	276	250	8.14	34.00	2.48	26.50	154	0.66
139	10.86	33.58	4.71	228	300	7.41	34.08	2.00	26.66	139	0.73
169	9.53	33.69	4.14	199	400	6.54	34.19	1.14	26.87	119	0.87
204	9.00	33.81	3.66	182	500	5.94	34.28	0.60	27.01	106	0.99
251	8.13	34.00	2.47	144							
329	7.08	34.11	1.79	132							
428	6.37	34.22	0.88	114							
556	5.64	34.32	0.48	99							

103.30

ORCA; January 11, 1959; 1827 GCT; 31°05'N, 116°25'W; sounding, 40 fm; wind, 280°, force 2; weather, cloudy; sea, slight; wire angle, 00°.

0	17.06	33.68	5.26	343	0	17.06	33.68	5.26	24.51	343	0.00
10	16.94	33.68	5.38	341	10	16.94	33.68	5.38	24.54	341	0.03
31	16.94	33.64	5.34	343	20	16.94	33.67	5.36	24.53	342	0.07
50	14.52	33.57	4.64	297	30	16.94	33.64	5.34	24.51	343	0.10
					50	14.52	33.57	4.64	25.00	297	0.17

103.35

ORCA; January 11, 1959; 2148 GCT; 30°55.5'N, 116°45.5'W; sounding, 900 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 11°.

0	17.69	33.75	5.33	353	0	17.69	33.75	5.33	24.40	353	0.00
10	17.40	33.74	5.36	347	10	17.40	33.74	5.36	24.47	347	0.03
30	17.25	33.74	5.30	343	20	17.30	33.74	5.34	24.49	345	0.07
40	17.20	33.71	5.23	345	30	17.25	33.74	5.30	24.51	343	0.10
49	16.76	33.71	5.12	335	50	16.68	33.71	5.10	24.62	333	0.17
59	15.40	33.61	4.88	313	75	14.69	33.55	4.77	24.94	302	0.25
69	15.10	33.58	4.81	309	100	11.76	33.58	4.02	25.56	244	0.32
83	13.47	33.52	4.65	280	150	10.13	33.87	2.75	26.06	196	0.43
98	11.86	33.58	4.06	246	200	9.05	34.04	2.26	26.38	166	0.52
113	11.32	33.69	3.41	228	250	8.78	34.23	1.94	26.57	147	0.60
138	10.38	33.80	2.92	204	300	8.53	34.33	0.78	26.68	137	0.68
168	9.80	33.95	2.46	184	400	7.28	34.27	0.67	26.83	123	0.81
202	9.02	34.05	2.22	164	500	6.23	34.26	0.55	26.96	111	0.93
251	8.78	34.23	1.36	147							
329	8.30	34.34	0.65	132							
428	6.88	34.25	0.69	120							
558	5.94	34.31	0.38	103							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 -5 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 -5 10 cm/g	ΔD dyn. m
103.40	ORCA; January 12, 1959; 0144, 0224, 0300 GCT; 30°45.5'N, 117°04'W; sounding, 900 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 09°, 11°, 07°.										
1	17.54	33.73	5.39	351	0	(17.54)	(33.73)	(5.39)	(24.43)	(351)	(0.00)
11	17.52	33.71	5.31	351	10	17.52	33.71	5.32	24.43	351	0.04
31	17.30	33.69	5.26	348	20	17.30	33.69	5.27	24.46	348	0.07
61	15.19	33.53	4.85	314	30	17.30	33.69	5.27	24.46	348	0.10
71	13.67	33.53	4.66	281	50	17.24	33.68	5.24	24.47	347	0.17
81	13.00	33.51	4.42	272	75	13.31	33.52	4.53	25.20	278	0.25
96	12.34	33.57	4.07	256	100	12.00	33.57	3.94	25.50	249	0.32
					150	9.78	33.78	3.24	26.06	196	0.43
109	11.26	33.57	3.70	236	200	9.19	33.96	2.56	26.30	174	0.53
125	10.62	33.63	3.74	221	250	8.50	34.12	2.00	26.53	151	0.61
145	9.90	33.76	3.29	200	300	7.93	34.19	1.49	26.66	138	0.68
165	9.52	33.84	3.08	188	400	6.96	34.24	0.83	26.85	121	0.82
					500	6.33	34.30	0.50	26.98	109	0.94
195	9.28	33.94	2.60	177	600	5.70	34.35	0.34	27.10	97	1.05
219	8.91	34.05	2.43	162							
274	8.21	34.16	1.70	144							
359	7.30	34.23	1.06	126							
469	6.52	34.28	0.56	112							
609	5.64	34.36	0.31	96							
103.50	ORCA; January 12, 1959; 0920 GCT; 30°18'N, 117°39'W; sounding, 1400 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 00°.										
1	17.18	33.72	5.30	344	0	(17.18)	(33.72)	(5.30)	(24.50)	(344)	(0.00)
11	17.18	33.73	5.24	343	10	17.18	33.73	5.23	24.51	343	0.03
31	17.16	33.74	5.33	341	20	17.17	33.74	5.32	24.52	342	0.07
56	16.24	33.64	5.04	328	30	17.16	33.74	5.33	24.52	342	0.10
66	13.52	33.49	5.04	283	50	17.12	33.73	5.32	24.55	340	0.17
76	12.81	33.55	4.58	266	75	12.84	33.55	4.59	25.32	266	0.25
86	12.02	33.60	4.15	247	100	11.16	33.64	3.87	25.71	229	0.31
101	11.12	33.64	3.86	228	150	9.55	33.88	2.98	26.17	185	0.42
116	10.68	33.66	3.72	220	200	8.56	33.96	2.64	26.39	164	0.50
135	10.01	33.80	3.20	198	250	7.83	34.06	2.03	26.58	146	0.58
155	9.36	33.89	2.94	182	300	7.52	34.17	1.38	26.71	134	0.66
180	8.70	33.91	2.93	170	400	6.76	34.28	0.64	26.91	115	0.79
204	8.51	33.96	2.60	163	500	5.94	34.32	0.40	27.04	103	0.90
254	7.77	34.07	1.96	144							
334	7.38	34.23	0.95	127							
436	6.43	34.30	0.53	110							
567	5.63	34.34	0.25	97							
103.60	ORCA; January 12, 1959; 1541, 1633 GCT; 29°50'N, 118°20'W; sounding, 1900 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 05°, 08°.										
1	16.74	33.55	5.42	346	0	(16.74)	(33.55)	(5.42)	(24.48)	(346)	(0.00)
11	16.73	33.58	5.48	344	10	16.73	33.58	5.48	24.50	344	0.03
31	16.71	33.57	5.46	343	20	16.72	33.57	5.47	24.51	343	0.07
61	16.22	33.55	5.39	334	30	16.71	33.57	5.46	24.51	343	0.10
71	15.58	33.51	5.47	324	50	16.50	33.56	5.39	24.55	340	0.17
82	14.61	33.50	5.45	304	75	14.74	33.48	5.46	24.87	309	0.25
97	12.96	33.55	4.80	268	100	12.70	33.57	4.62	25.36	262	0.33
					150	10.37	33.63	3.57	25.84	216	0.45
120	11.50	33.60	3.78	238	200	9.18	33.95	2.66	26.29	174	0.54
140	10.66	33.60	3.76	224	250	8.22	34.02	2.15	26.49	155	0.63
160	10.15a)	33.73	3.30	206	300	7.85	34.14	1.54	26.64	141	0.71
191	9.54b)	33.95	2.58	179	400	7.01	34.24	0.88	26.84	122	0.84
214	8.60	33.91	2.76	168	500	6.08	34.26	0.50	26.98	109	0.96
269	8.07	34.08	1.84	149	600	5.60	34.31	0.33	27.08	99	1.07
353	7.49	34.22	1.14	130							
462	6.36	34.24	0.60	113							
603	5.58	34.31	0.31	99							

a) Alternate value, 9.92°C, not used in interpolation.
b) Alternate value, 9.76°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

103.70

ORCA; January 12, 1959; 2223 GCT; 29°31'N, 119°13'W; sounding, 1900 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 12°.

1	17.14	33.58	5.31	353	0	(17.14)	(33.58)	(5.31)	(24.41)	(353)	(0.00)
11	17.02	33.56	5.35	352	10	17.03	33.56	5.34	24.42	352	0.04
31	16.88	33.56	5.39	349	20	16.93	33.56	5.37	24.44	350	0.07
55	16.72	33.53	5.38	347	30	16.88	33.56	5.38	24.45	349	0.10
65	16.69	33.54	5.39	345	50	16.74	33.53	5.38	24.47	347	0.17
75	16.24	33.48	5.37	340	75	16.24	33.48	5.37	24.54	340	0.26
84	15.47	33.48	5.43	324	100	14.30	33.50	5.24	24.99	298	0.34
99	14.30a)	33.50	5.26	299	150	10.53	33.64	3.82	25.82	218	0.47
114	13.10	33.48	5.01	276	200	9.06	33.90	2.86	26.26	177	0.57
134	11.26	33.58	4.28	236	250	8.27	34.04	2.29	26.50	154	0.66
154	10.33	33.66	3.66	213	300	7.94	34.19	1.53	26.67	138	0.73
178	9.49	33.82	3.00	189	400	7.05	34.24	0.78	26.83	123	0.87
202	9.03	33.90	2.83	176	500	6.26	34.28	0.50	26.97	110	0.99
251	8.26	34.04	2.28	154							
329	7.76	34.22	1.22	133							
427	6.79	34.24	0.68	119							
557	5.98	34.33	0.36	102							

103.80

ORCA; January 13, 1959; 0253 GCT; 29°16'N, 119°41'W; sounding, 1800 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 02°.

1	17.78	33.75	5.24	355	0	(17.78)	(33.75)	(5.24)	(24.39)	(355)	(0.00)
11	17.80	33.78	5.38	354	10	17.80	33.78	5.38	24.40	354	0.04
31	17.74	33.76	5.41	354	20	17.76	33.77	5.40	24.40	354	0.07
61	17.72	33.78	5.43	341	30	17.75	33.76	5.41	24.40	354	0.11
71	16.84	33.70	5.67	337	50	17.72	33.76	5.42	24.41	353	0.18
81	15.70	33.63	5.67	317	75	16.28	33.66	5.67	24.67	328	0.26
96	14.58	33.59	5.61	297	100	14.00	33.55	5.61	25.08	289	0.34
111	14.41	33.91	5.38	270	150	10.72	33.68	4.65	25.82	219	0.47
126	12.94	33.78	5.11	251	200	9.18	33.81	3.77	26.18	185	0.57
146	10.98	33.70	4.70	222	250	8.24	34.00	2.54	26.47	157	0.66
166	9.98	33.61	4.47	212	300	7.64	34.08	1.83	26.62	143	0.74
196	9.27	33.78	3.89	188	400	6.58	34.14	1.12	26.82	124	0.88
221	8.64	33.88	3.24	171	500	6.10	34.29	0.46	27.00	107	1.00
276	7.96	34.06	2.03	148	600	5.52	34.33	0.29	27.10	97	1.10
361	6.82	34.09	1.41	131							
471	6.26	34.25	0.58	112							
611	5.46	34.34	0.28	95							

103.90

ORCA; January 13, 1959; 0805, 0844 GCT; 29°10'N, 120°24'W; sounding, 2000 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°, 00°.

0	17.67	33.78	5.23	350	0	17.67	33.78	5.23	24.44	350	0.00
11	17.68	33.75	5.30	352	10	17.68	33.75	5.30	24.42	352	0.04
31	17.64	33.78	5.32	349	20	17.66	33.76	5.31	24.43	351	0.07
56	17.33	33.79	5.45	342	30	17.64	33.78	5.32	24.44	350	0.10
66	15.68	33.57	5.69	322	50	17.57	33.78	5.34	24.46	348	0.18
76	14.25	33.37	5.50	307	75	14.27	33.37	5.51	24.89	307	0.26
86	13.98	33.48	5.43	293	100	12.30	33.44	4.96	25.34	264	0.33
101	12.24	33.44	4.93	263	150	9.61	33.66	3.81	26.00	202	0.45
116	10.92	33.44	4.62	240	200	8.67	33.93	2.53	26.35	168	0.54
135	9.97	33.56	3.99	215	250	8.01	34.04	2.10	26.54	150	0.62
155	9.50	33.69	3.72	198	300	7.40	34.06	1.69	26.65	140	0.70
180	9.00	33.80	2.96	183	400	6.37	34.16	0.93	26.87	119	0.83
205	8.59	33.95	2.46	165	500	5.79	34.26	0.56	27.02	105	0.95
255	7.95	34.05	2.06	148							
335	6.99	34.07	1.40	134							
436	6.07	34.20	0.76	113							
567	5.64	34.33	0.36	98							

a) Mean value of 14.24 and 14.35°C.

SIO

CCOFI 5901

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

107.32 ORCA; January 11, 1959; 1236 GCT; 30°26'N, 116°11.5'W; sounding, 164 fm; wind, 270°, force 1; weather, cloudy; sea, slight; wire angle, 03°.

1	17.60	33.71	5.34	354	0	(17.60)	(33.71)	(5.34)	(24.40)	(354)	(0.00)
11	17.62	33.70	5.33	355	10	17.62	33.70	5.33	24.38	355	0.04
31	17.36	33.71	5.31	348	20	17.52	33.70	5.32	24.41	353	0.07
51	15.46	33.67	4.71	310	30	17.36	33.71	5.31	24.46	348	0.10
76	12.99	33.64	3.43	262	50	15.52	33.67	4.76	24.85	311	0.17
102	11.36	33.68	3.49	230	75	13.04	33.64	3.44	25.36	263	0.24
126	10.88	33.93	2.26	203	100	11.45	33.67	3.50	25.67	233	0.31
165	10.55	34.15	1.54	181	150	10.54	34.06	1.85	26.14	188	0.41
206	10.29	34.27	1.14	168	200	10.36	34.26	1.17	26.33	170	0.50

107.35 ORCA; January 11, 1959; 0933, 0956 GCT; 30°26.5'N, 116°22'W; sounding, 1000 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 06°, missing.

1	17.10	33.70	5.20	343	0	(17.10)	(33.70)	(5.20)	(24.51)	(343)	(0.00)
11	17.12	-	-		10	17.11	(33.69)		(24.51)	(343)	(0.03)
31	16.23	33.59	5.12	332	20	17.00	(33.67)	(5.19)	(24.52)	(342)	(0.07)
46	14.72	33.51	4.92	306	30	16.30	(33.60)	(5.13)	(24.62)	(333)	(0.10)
56	14.34	33.66	4.52	287	50	14.58	33.58	4.76	24.99	298	0.16
66	13.18	33.52	4.55	275	75	12.34	33.53	4.30	25.40	259	0.23
76	12.32	33.53	4.28	258	100	11.14	33.65	3.76	25.72	228	0.30
95	11.21	33.58	3.91	234	150	9.74	33.86	2.85	26.12	190	0.40
110	10.33	33.67	3.64	211	200	10.19	34.33	1.04	26.42	162	0.49
					250	9.47	34.37	0.81	26.56	148	0.57
126	10.15	33.71	3.42	207	300	8.69	34.34	0.73	26.67	138	0.64
151	9.74	33.86	2.80	189	400	7.45	34.29	0.68	26.81	125	0.78
182	10.26	34.23	1.29	170	500	6.70	34.28	0.57	26.92	115	0.91
221	9.93	34.37	0.91	155	600	5.92	34.32	0.37	27.05	102	1.02
275	9.08	34.36	0.74	143							
359	7.90	34.31	0.72	128							
464	6.96	34.27	0.61	119							
610	5.84	34.33	0.32	100							

107.40 ORCA; January 11, 1959; 0604 GCT; 30°15'N, 116°41.5'W; sounding, 1800 fm; wind, 360°, force 4; weather, cloudy; sea, moderate; wire angle, 09°.

1	17.48	33.77	5.34	346	0	(17.48)	(33.77)	(5.34)	(24.48)	(346)	(0.00)
11	17.48	33.76	5.41	347	10	17.48	33.76	5.41	24.48	346	0.03
31	17.46	33.75	5.39	348	20	17.47	33.76	5.40	24.47	347	0.07
46	17.44	33.76	5.38	346	30	17.46	33.75	5.39	24.46	348	0.10
56	17.12	33.73	5.14	341	50	17.38	33.76	5.32	24.49	345	0.17
66	16.40	33.63	5.21	332	75	14.42	33.60	4.83	25.04	292	0.25
76	14.38	33.60	4.82	292	100	12.37	33.68	3.96	25.51	248	0.32
95	12.73	33.64	4.13	257	150	9.75	33.80	3.08	26.08	194	0.43
110	11.64	33.71	3.76	232	200	8.77	34.08	2.16	26.45	159	0.52
125	10.70	33.66	3.92	220	250	8.24	34.18	1.60	26.61	144	0.60
151	9.72	33.80	3.06	193	300	7.96	34.25	1.18	26.72	134	0.67
179	9.14	34.00	2.46	170	400	7.19	34.29	0.66	26.86	120	0.80
220	8.50	34.13	1.89	150	500	6.42	34.29	0.45	26.96	110	0.92
274	8.14	34.22	1.38	139	600	5.63	34.34	0.35	27.10	98	1.04
356	7.54	34.29	0.82	125							
461	6.72	34.29	0.50	114							
605	5.60	34.34	0.34	97							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m
ORCA; January 10, 1959; 2325 GCT; 29°53'N, 117°23.5'W; sounding, 1300 fm; wind, 360°, force 4; weather, drizzle; sea, moderate; wire angle, 08°.											107.50
1	17.48	33.71	5.40	351	0	(17.48)	(33.71)	(5.40)	(24.43)	(351)	(0.00)
11	17.48	33.69	5.41	352	10	17.48	33.69	5.41	24.42	352	0.04
31	16.96	33.62	5.47	345	20	17.33	33.67	5.44	24.44	350	0.07
46	16.92	33.64	5.40	344	30	16.97	33.62	5.47	24.49	346	0.10
56	15.28	33.49	5.47	318	50	16.80	33.63	5.40	24.52	342	0.17
66	14.37	33.49	5.35	300	75	13.25	33.55	4.83	25.24	274	0.25
76	13.24	33.55	4.82	274	100	11.38	33.60	4.22	25.64	236	0.32
96	11.58	33.60	4.35	239	150	9.91	33.80	3.01	26.05	197	0.42
110	11.00	33.62	3.91	228	200	9.10	34.09	2.07	26.41	163	0.52
125	10.46	33.71	3.60	212	250	8.39	34.17	1.64	26.59	146	0.59
149	9.94	33.80	3.02	197	300	7.77	34.19	1.33	26.69	136	0.67
178	9.40	33.98	2.46	176	400	6.96	34.27	0.74	26.87	119	0.80
218	8.85	34.15	1.84	154	500	6.10	34.34	0.49	27.04	103	0.92
272	8.08	34.18	1.51	141	600	5.52	34.36	0.45	27.12	95	1.02
356	7.38	34.24	0.92	127							
461	6.40	34.32	0.53	108							
608	5.49	34.36	0.45	94							
ORCA; January 10, 1959; 1644 GCT; 29°32'N, 118°09'W; sounding, 1800 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 13°.											107.60
3	16.76	33.58	5.49	344	0	(16.76)	(33.58)	(5.49)	(24.50)	(344)	(0.00)
13	16.75	33.57	5.51	344	10	16.75	33.57	5.50	24.50	344	0.03
32	16.82	33.59	5.49	345	20	16.79	33.58	5.50	24.49	345	0.07
57	16.57	33.55	5.44	342	30	16.82	33.59	5.49	24.49	345	0.10
66	16.52	33.54	5.45	341	50	16.63	33.56	5.45	24.51	343	0.17
76	16.46	33.55	5.51	340	75	16.47	33.55	5.50	24.55	340	0.26
86	16.04	33.50	5.47	334	100	14.02	33.48	5.24	25.03	294	0.34
101	13.92a)	33.48	5.24	292	150	10.40	33.56	4.52	25.79	222	0.47
116	12.67	33.61	5.22	258	200	9.36	33.96	2.63	26.26	176	0.57
135	11.46	33.55	4.60	241	250	8.28	34.04	2.33	26.50	154	0.65
154	10.26	33.60	4.47	217	300	7.55	34.09	1.96	26.65	140	0.73
178	9.46	33.78	3.44	191	400	6.80	34.20	1.03	26.84	122	0.86
203	9.34	33.98	2.58	174	500	6.14	34.28	0.64	26.99	108	0.99
250	8.28	34.04	2.33	154							
327	7.20	34.11	1.71	134							
424	6.68	34.23	0.82	118							
555	5.73	34.35	0.57	98							
ORCA; January 10, 1959; 0921, 0956 GCT; 29°13'N, 118°50'W; sounding, 1870 fm; wind, 360°, force 4; weather, drizzle; sea, moderate; wire angle, 12°, 15°.											107.70
1	17.60	33.68	5.39	356	0	(17.60)	(33.68)	(5.39)	(24.38)	(356)	(0.00)
11	17.60	33.69	5.38	355	10	17.60	33.69	5.38	24.39	355	0.04
31	17.53	33.67	5.44	355	20	17.56	33.68	5.41	24.39	355	0.07
56	16.91	33.57	5.39	348	30	17.54	33.67	5.43	24.39	355	0.11
66	16.74	33.53	5.39	347	50	16.92	33.57	5.39	24.46	348	0.18
76	15.56b)	33.48	5.04	325	75	15.67	33.48	5.08	24.67	328	0.26
86	14.62	33.55	4.90	301	100	13.37	33.58	4.25	25.25	273	0.34
100	13.37	33.58	4.25	273	150	10.37	33.65	3.85	25.86	215	0.46
115	12.09	33.53	4.59	254	200	9.15	33.92	2.94	26.28	175	0.56
135	10.74	33.58	4.13	226	250	8.36	34.05	2.30	26.49	155	0.64
154	10.28	33.67	3.79	212	300	7.97	34.17	1.55	26.66	139	0.72
179	9.76	33.80	3.15	194	400	7.12	34.24	0.90	26.83	123	0.86
204	9.02	33.94	2.90	173	500	6.31	34.28	0.54	26.97	109	0.98
251	8.36	34.05	2.28	154							
329	7.72	34.22	1.22	133							
427	6.88	34.25	0.78	120							
558	5.94	34.33	0.38	102							

a) Mean value of 13.84 and 14.00°C.
b) Mean value of 15.49 and 15.62°C.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
107.80	ORCA; January 10, 1959; 0333 GCT; 28°53'N, 119°22.5'W; sounding, 2000 fm; wind, 360°, force 3; weather, drizzle; sea, moderate; wire angle, 12°.										
0	18.00	33.93	5.29	347	0	18.00	33.93	5.29	24.47	347	0.00
10	18.01	33.94	5.36	347	10	18.01	33.94	5.36	24.47	347	0.03
29	17.98	33.96	5.35	344	20	17.99	33.95	5.35	24.49	346	0.07
54	18.03	34.00	5.37	342	30	17.98	33.96	5.35	24.50	344	0.10
63	18.28u	34.11	5.31	341	50	18.03	34.00	5.36	24.52	343	0.17
73	17.38	33.95	5.53	331	75	17.17	33.92	5.56	24.67	328	0.26
83	16.56	33.90	5.61	316	100	15.39	33.80	5.60	24.98	299	0.34
99	15.46	33.80	5.60	300	150	11.63	33.66	5.00	25.64	236	0.47
113	14.86	33.78	5.44	289	200	9.17	33.80	3.58	26.17	186	0.58
133	13.12	33.73	5.11	258	250	8.26	34.02	2.67	26.49	155	0.67
153	11.38	33.66	4.95	232	300	7.73	34.11	1.90	26.64	142	0.74
177	9.68	33.67	4.24	203	400	6.84	34.18	1.00	26.81	124	0.88
201	9.16	33.80	3.56	185	500	5.97	34.22	0.61	26.96	110	1.01
250	8.26	34.02	2.67	155							
330	7.50	34.14	1.57	136							
430	6.55	34.18	0.86	120							
560	5.52	34.26	0.43	102							
107.90	ORCA; January 9, 1959; 2138 GCT; 28°33'N, 119°56'W; sounding, 2000 fm; wind, 330°, force 3; weather, drizzle; sea, moderate; wire angle, 03°.										
1	18.65	34.02	-	356	0	(18.65)	(34.02)	(5.28)	(24.38)	(356)	(0.00)
11	18.42	34.04	5.28	349	10	18.42	34.04	(5.28)	24.45	349	0.04
31	18.40	34.05	5.24	348	20	18.40	34.04	5.26	24.46	348	0.07
56	18.32	34.02	5.35	348	30	18.40	34.05	5.24	24.46	348	0.10
66	18.24	34.02	5.35	346	50	18.36	34.03	5.32	24.46	348	0.17
76	18.16	33.96	5.32	349	75	18.16	33.96	5.32	24.45	349	0.26
86	17.90	34.04	5.43	336	100	16.89	33.96	5.57	24.76	319	0.35
101	16.89	33.96	5.57	319	150	12.46	33.66	5.18	25.48	251	0.49
116	15.61	33.84	5.58	300	200	9.50	33.74	3.93	26.07	195	0.60
135	13.67	33.61	5.21	277	250	8.62	33.97	2.80	26.39	164	0.70
155	12.07	33.68	5.05	242	300	7.89	34.02	2.25	26.55	150	0.78
179	10.41	33.63	4.59	217	400	6.91	34.13	1.29	26.77	128	0.92
205	9.35	33.78	3.72	190	500	6.21	34.26	0.59	26.96	110	1.05
255	8.54	33.98	2.72	162							
335	7.41	34.05	1.91	142							
435	6.68	34.19	0.99	121							
565	5.77	34.31	0.34	101							
110.33	ORCA; January 7, 1959; 2110 GCT; 29°50'N, 115°52'W; sounding, 42 fm; wind, 220°, force 3; weather, drizzle; sea, very rough; wire angle, 02°.										
0	17.32	33.69	5.22	348	0	17.32	33.69	5.22	24.46	348	0.00
10	17.09	33.68	5.34	344	10	17.09	33.68	5.34	24.50	344	0.03
30	16.56	33.66	5.27	334	20	17.06	33.69	5.31	24.51	343	0.07
50	15.15	33.66	4.46	304	30	16.56	33.66	5.27	24.61	334	0.10
					50	15.15	33.66	4.46	24.93	304	0.17

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

ORCA; January 7, 1959; 2307 GCT; 29°46.5'N, 116°00'W; sounding, 750 fm; wind, calm; weather, partly cloudy; sea, very rough; wire angle, 06°. 110.35

0	17.96	33.75	5.08	359	0	17.96	33.75	5.08	24.34	359	0.00
10	17.67	33.75	5.28	353	10	17.67	33.75	5.28	24.41	353	0.04
30	17.36	33.70	5.33	349	20	17.50	33.72	5.32	24.43	351	0.07
40	17.06	33.69	5.26	343	30	17.36	33.70	5.33	24.45	349	0.10
50	16.51	33.60	4.94	338	50	16.51	33.60	4.94	24.58	338	0.17
60	15.98	33.60	4.88	325	75	14.50	33.63	4.54	25.05	292	0.25
70	14.70	33.59	4.72	300	100	12.18	33.54	4.54	25.44	254	0.32
85	13.50	33.58	4.54	277	150	10.65	33.89	2.61	25.99	203	0.44
100	12.18	33.54	4.54	254	200	10.32	34.26	1.47	26.34	169	0.53
115	11.17	33.67	3.88	227	250	9.86	34.40	0.90	26.53	151	0.61
141	10.89	33.84	2.78	210	300	9.14	34.39	0.80	26.64	141	0.69
169	10.21	34.02	2.27	185	400	7.82	34.35	0.63	26.81	125	0.83
204	10.34	34.29	1.35	168	500	6.82	34.36	0.56	26.96	110	0.95
254	9.82	34.41	0.88	150							
333	8.66	34.37	0.76	135							
433	7.46	34.35	0.55	120							
562	6.25	34.37	0.56	102							

ORCA; January 8, 1959; 0253 GCT; 29°34.5'N, 116°21'W; sounding, 1100 fm; wind, 260°, force 1; weather, partly cloudy; sea, very rough; wire angle, 04°. 110.40

1	18.24	33.80	5.32	362	0	(18.24)	(33.80)	(5.32)	(24.31)	(362)	(0.00)
10	18.03	33.79	5.37	358	10	18.03	33.79	5.37	24.35	358	0.04
31	17.99	33.80	5.37	356	20	17.99	33.80	5.37	24.37	356	0.07
56	18.00	33.82	5.35	355	30	17.99	33.80	5.37	24.37	356	0.11
66	17.64	33.82	5.37	345	50	18.00	33.82	5.36	24.38	355	0.18
76	16.16	33.76	5.40	318	75	16.18	33.76	5.40	24.77	318	0.26
86	15.80	33.79	5.51	308	100	14.02	33.62	5.15	25.14	284	0.34
101	13.98	33.62	5.11	283	150	11.10	33.81	3.24	25.85	216	0.46
116	12.84	33.64	4.40	260	200	9.42	33.94	2.60	26.24	178	0.56
136	11.60	33.73	3.72	230	250	8.79	34.09	2.24	26.46	158	0.65
155	11.02	33.86	3.05	211	300	8.61	34.25	1.55	26.61	144	0.73
181	10.78	34.08	2.13	190	400	7.80	34.36	0.60	26.82	124	0.87
205	9.22	33.95	2.66	175	500	6.76	34.33	0.57	26.94	112	0.99
255	8.78	34.11	2.16	156							
335	8.44	34.33	1.06	135							
434	7.43	34.36	0.52	119							
564	6.30	34.31	0.66	108							

ORCA; January 8, 1959; 0858 GCT; 29°12'N, 116°58'W; sounding, 1100 fm; wind, 340°, force 1; weather, partly cloudy; sea, rough; wire angle, 00°. 110.50

1	18.15	33.80	4.91	360	0	(18.15)	(33.80)	(4.91)	(24.33)	(360)	(0.00)
11	18.18	33.81	5.06	359	10	18.18	33.81	5.05	24.34	359	0.04
31	18.14	33.83	4.63	358	20	18.14	33.82	4.87	24.36	358	0.07
56	18.12	33.82	4.91	358	30	18.14	33.83	4.65	24.36	358	0.11
66	18.10	33.83	5.26	356	50	18.12	33.83	4.84	24.36	358	0.18
76	16.43	33.66	5.08	331	75	16.45	33.66	5.09	24.63	332	0.26
86	15.60	33.65	5.19	314	100	14.82	33.68	4.95	25.02	295	0.35
102	14.70	33.69	4.90	292	150	11.70	33.83	2.91	25.76	224	0.48
116	12.92	33.55	4.46	267	200	10.66	34.10	1.96	26.16	186	0.58
137	12.14	33.68	3.69	244	250	9.09	34.09	2.18	26.41	163	0.67
156	11.57	33.91	2.58	216	300	8.62	34.20	1.75	26.58	147	0.75
181	11.13	34.07	1.96	197	400	7.51	34.28	0.88	26.80	126	0.89
206	10.48	34.11	1.98	183	500	6.49	34.30	0.54	26.96	111	1.02
256	9.02	34.10	2.20	161							
337	8.23	34.25	1.34	138							
437	7.08	34.29	0.69	119							
569	6.02	34.34	0.43	102							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
110.60	ORCA; January 8, 1959; 1542 GCT; 28°51'N, 117°35'W; sounding, 2000 fm; wind, 280°, force 1; weather, partly cloudy; sea, rough; wire angle, 00°.										
204	10.70	34.33	1.14	161	250	9.93	34.38	0.92	26.50	154	
254	9.88	34.39	0.89	152	300	9.26	34.41	0.70	26.63	142	
334	8.84	34.42	0.55	134	400	8.02	34.42	0.38	26.84	122	
434	7.59	34.42	0.34	116	500	6.86	34.41	0.28	26.99	107	
565	6.32	34.40	0.25	101							
110.70	ORCA; January 9, 1959; 0324 GCT; 28°36'N, 118°18'W; sounding, 2000 fm; wind, 120°, force 1; weather, partly cloudy; sea, missing; wire angle, 00°.										
205	8.66	33.95		166							
256	8.31	34.12		148							
335	7.89	34.30		130							
435	6.89	34.31		115							
110.80	ORCA; January 9, 1959; 0844 GCT; 28°16'N, 118°55'W; sounding, 2000 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 02°.										
.0	18.52	34.09	5.28	347	0	18.52	34.09	5.28	24.47	347	0.00
11	18.54	34.11	5.36	346	10	18.54	34.11	5.35	24.48	346	0.03
30	18.20	34.04	5.35	344	20	18.39	34.09	5.35	24.49	345	0.07
55	18.14	34.04	5.33	342	30	18.20	34.04	5.35	24.51	344	0.10
66	18.10	34.02	5.27	342	50	18.14	34.04	5.34	24.52	342	0.17
76	17.96	34.02	5.40	339	75	17.96	34.02	5.36	24.55	339	0.26
85	17.22	34.09	5.52	317	100	16.09	33.98	5.45	24.96	300	0.34
100	16.09	33.98	5.45	300	150	11.83	33.69	4.92	25.63	237	0.48
114	15.48	33.98	5.31	287	200	9.40	33.74	4.15	26.09	193	0.58
134	13.19	33.80	4.98	254	250	8.41	33.94	3.08	26.40	164	0.68
154	11.60	33.68	4.90	234	300	7.66	34.06	2.27	26.60	144	0.76
179	10.10	33.68	4.56	209	400	6.79	34.17	1.15	26.82	124	0.90
204	9.28	33.75	4.05	191	500	6.29	34.28	0.67	26.97	110	1.02
254	8.34	33.96	2.98	161							
334	7.25	34.09	1.84	136							
434	6.66	34.22	0.90	119							
566	5.94	34.36	0.44	99							
110.90	ORCA; January 9, 1959; 1518 GCT; 27°55.5'N, 119°31.5'W; sounding, 2000 fm; wind, 360°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.										
1	19.08	34.13	5.20	358	0	(19.08)	(34.13)	(5.20)	(24.35)	(358)	(0.00)
11	19.10	34.11	5.23	360	10	19.10	34.12	5.23	24.33	360	0.04
31	19.07	34.11	5.20	360	20	19.08	34.11	5.21	24.33	360	0.07
56	18.88	34.13	5.26	353	30	19.07	34.11	5.20	24.33	360	0.11
66	18.62	34.07	5.37	351	50	18.94	34.13	5.24	24.39	355	0.18
76	18.14	34.00	5.45	345	75	18.15	34.00	5.43	24.49	345	0.27
86	17.90	34.09	5.52	333	100	17.08	34.12	5.52	24.84	312	0.35
101	17.07	34.12	5.52	312	150	12.44	33.76	5.00	25.56	243	0.49
116	16.35	34.09	5.35	298	200	10.40	33.90	3.84	26.05	197	0.60
136	14.26	33.89	5.09	268	250	9.43	34.12	2.13	26.38	166	0.70
155	11.91	33.72	4.95	236	300	8.85	34.21	1.64	26.54	151	0.78
180	10.78	33.67	3.96	221	400	7.63	34.23	1.05	26.75	131	0.93
204	10.33	33.95	2.69	192	500	6.57	34.26	0.70	26.92	114	1.06
254	9.39	34.13	2.07	164							
334	8.52	34.23	1.40	144							
434	7.14	34.23	0.88	124							
564	6.24	34.34	0.45	104							
113.30	SPENCER F. BAIRD; January 7, 1959; 2339 GCT; 29°22.5'N, 115°17.5'W; sounding, 30 fm; wind, 250°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.										
1	17.81	33.86		348	0	(17.81)	(33.86)		(24.46)	(348)	(0.00)
10	17.52	33.86		341	10	17.52	33.86		24.54	341	0.03
29	17.46	33.86		339	20	17.49	33.86		24.55	340	0.07
39	17.23	33.84		336	30	17.44	33.86		24.56	339	0.10

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; January 8, 1959; 0206 GCT; 29°12'N, 115°39'W; sounding, 647 fm; wind, 270°, force 2; weather, partly cloudy; sea, very rough; wire angle, 18°. 113.35

0	17.88	33.77	356	0	17.88	33.77	24.38	356	0.00
10	17.76	33.72	356	10	17.76	33.72	24.37	357	0.04
28	17.23	33.70	346	20	17.48	33.71	24.43	351	0.07
37	17.37	33.87	344	30	17.25	33.71	24.49	346	0.10
46	16.40	33.68	329	50	15.78	33.62	24.76	320	0.17
55	15.20	33.60	309	75	13.49	33.60	25.24	274	0.25
64	14.34	33.60	292	100	12.00	33.68	25.59	241	0.31
78	13.27	33.60	270	150	10.34	33.96	26.10	192	0.42
92	12.22	33.58	252	200	10.34	34.33	26.40	164	0.51
106	12.14	33.83	232	250	9.64	34.33	26.51	153	0.59
128	10.72	33.82	208	300	8.98	34.39	26.67	139	0.67
154	10.32	33.99	189	400	7.93	34.36	26.80	125	0.80
185	10.46	34.29	169	500	6.78	34.38	26.98	108	0.93
230	9.93	34.33	158						
304	8.94	34.39	138						
396	7.98	34.36	126						
519	6.55	34.39	104						

SPENCER F. BAIRD; January 8, 1959; 0518 GCT; 29°02'N, 115°58.5'W; sounding, 930 fm; wind, 260°, force 2; weather, clear; sea, rough; wire angle, 18°. 113.40

1	17.86	33.75	356	0	(17.86)	(33.75)	(24.37)	(356)	(0.00)
9	17.74	33.75	354	10	17.73	33.75	24.40	354	0.04
28	17.68	33.76	351	20	17.69	33.76	24.42	352	0.07
55	17.43	33.78	344	30	17.67	33.76	24.43	351	0.11
64	17.32	33.78	342	50	17.52	33.77	24.47	347	0.18
73	16.02	33.60	326	75	15.82	33.59	24.73	322	0.26
87	14.78	33.58	302	100	13.08	33.57	25.29	269	0.34
100	13.08	33.57	269	150	10.54	33.96	26.07	195	0.45
114	11.68	33.60	241	200	10.30	34.22	26.31	172	0.54
132	11.20	33.77	220	250	9.76	34.40	26.55	150	0.63
151	10.52	33.97	194	300	9.23	34.40	26.63	142	0.70
177	10.16	34.03	184						
199	10.30	34.04u							
249	9.78	34.40	150						
328	8.92	34.39	138						

SPENCER F. BAIRD; January 8, 1959; 1050 GCT; 28°39'N, 116°38.5'W; sounding, 1860 fm; wind, 270°, force 2; weather, clear; sea, rough; wire angle, 00°. 113.50

2	18.14	33.81	359	0	(18.14)	(33.81)	(24.34)	(359)	(0.00)
11	18.16	33.80	360	10	18.16	33.80	24.34	360	0.04
30	18.14	33.82	358	20	18.15	33.80	24.34	360	0.07
58	17.70	33.78	351	30	18.14	33.82	24.35	358	0.11
70	16.74	33.64	340	50	17.96	33.81	24.40	355	0.18
79	15.42	33.58	315	75	16.00	33.59	24.69	326	0.26
94	14.10	33.57	289	100	13.60	33.58	25.20	278	0.34
108	13.03	33.60	266	150	10.43	33.68	25.87	214	0.46
122	12.06	33.68	242	200	9.49	34.03	26.30	173	0.56
141	10.81	33.62	225	250	9.11	34.20	26.49	155	0.65
160	10.15	33.79	201	300	8.80	34.32	26.64	141	0.72
187	9.68	34.01	177	400	7.74	34.38	26.85	121	0.86
211	9.35	34.05	170	500	6.70	34.38	27.00	107	0.98
263	9.06	34.24	151	600	(6.09)	(34.43)	(27.11)	(96)	(1.09)
344	8.42	34.38	131						
448	7.17	34.38	114						
585	6.18	34.42	98						

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
113.60	SPENCER F. BAIRD; January 8, 1959; 1656 GCT; 28°16.5'N, 117°16.5'W; sounding, 2000 fm; wind, 010°, force 2; weather, partly cloudy; sea, rough; wire angle, 05°.										
1	17.98	33.81		355	0	(17.98)	(33.81)		(24.39)	(355)	(0.00)
10	17.96	33.84a)		353	10	17.96	33.84		24.41	353	0.04
29	17.91	33.78		356	20	17.93	33.79		24.38	356	0.07
53	16.58	33.84		321	30	17.90	33.78		24.38	356	0.11
63	16.28	33.78		319	50	17.90	33.78		24.38	356	0.18
72	15.94	33.82		308	75	15.81	33.84		24.93	304	0.26
81	15.46	33.86		295	100	13.02	33.65		25.37	262	0.33
95	13.52	33.69		268	150	10.17	33.90		26.09	193	0.45
110	12.06	33.61		248	200	9.12	34.07		26.39	165	0.54
129	10.84	33.68		221	250	8.78	34.17		26.52	152	0.62
148	10.22	33.90		194	300	8.59	34.17		26.56	149	0.70
171	9.69	33.96		181	400	7.64	34.17		26.69	136	0.84
195	9.18	34.05		167	500	6.76	34.17		26.82	124	0.98
242	8.82	34.16		153							
319	8.52	34.17		148							
413	7.50	34.17		134							
536	6.45	34.17		120							
113.70	SPENCER F. BAIRD; January 8, 1959; 2158 GCT; 28°02'N, 117°55.5'W; sounding, 1800 fm; wind, 040°, force 3; weather, partly cloudy; sea, very rough; wire angle, 02°.										
2	18.84	34.05		358	0	(18.84)	(34.05)		(24.36)	(358)	(0.00)
11	18.72	34.08		353	10	18.73	34.08		24.41	353	0.04
31	18.62	34.11		349	20	18.65	34.10		24.44	350	0.07
54	18.54	34.05		348	30	18.62	34.11		24.46	348	0.10
63	18.17	34.04		343	50	18.58	34.06		24.46	348	0.18
74	17.07	33.96		324	75	16.97	33.95		24.74	322	0.26
82	16.58	34.00		310	100	15.60	34.02		25.11	286	0.34
97	15.83	34.04		290	150	11.52	33.70		25.69	231	0.47
112	14.33	33.86		272	200	9.31	33.79		26.14	188	0.57
131	12.32	33.65		249	250	8.35	34.06		26.51	153	0.66
150	11.52	33.70		231	300	7.69	34.15		26.68	138	0.74
174	9.81	33.66		206	400	6.92	34.25		26.86	120	0.87
198	9.34	33.78		189	500	6.33	34.31		26.99	108	0.99
245	8.42	34.04		156							
321	7.49	34.18		133							
416	6.81	34.26		118							
541	6.07	34.33		103							
113.80	SPENCER F. BAIRD; January 9, 1959; 0240 GCT; 27°42'N, 118°32.5'W; sounding, 2110 fm; wind, 050°, force 3; weather, partly cloudy; sea, rough; wire angle, 07°.										
1	18.70	34.03		356	0	(18.70)	(34.03)		(24.38)	(356)	(0.00)
10	18.65	34.04		354	10	18.65	34.04		24.40	354	0.04
29	18.43	34.04		349	20	18.62	34.04		24.40	354	0.07
53	18.44	34.09		346	30	18.43	34.04		24.45	349	0.11
62	18.47	34.09		346	50	18.43	34.09		24.48	346	0.18
72	18.47	34.14		343	75	18.47	34.13		24.51	344	0.26
81	18.45	34.11		344	100	17.00	33.92		24.71	324	0.35
95	18.23	34.04		344	150	12.65	33.88		25.61	239	0.49
110	16.07	33.89		306	200	9.83	33.78		26.05	197	0.60
129	15.18	33.94		284	250	8.87	34.02		26.39	164	0.70
147	13.13	33.95		242	300	8.29	34.15		26.58	146	0.78
172	10.74	33.62		224	400	7.24	34.26		26.83	124	0.92
195	9.96	33.75		201	500	6.42	34.32		26.98	108	1.04
242	9.00	34.00		168							
317	8.10	34.18		141							
410	7.15	34.27		122							
533	6.19	34.34		104							

a) Loose bottle cap; value falls on property curve.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m	
SPENCER F. BAIRD; January 9, 1959; 0727 GCT; 27°22.5'N, 119°13.5'W; sounding, 2200 fm; wind, 020°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°.												113.90
2	18.99	33.96		368	0	(18.99)	(33.96)		(24.25)	(368)	(0.00)	
11	18.97	33.97		367	10	18.97	33.97		24.26	367	0.04	
30	18.92	33.96		366	20	18.94	33.97		24.26	367	0.07	
54	18.86	33.96		365	30	18.92	33.96		24.27	366	0.11	
64	18.80	33.96		364	50	18.87	33.96		24.27	366	0.18	
73	18.70	33.96		361	75	18.62	33.96		24.33	360	0.27	
83	16.56	33.73		329	100	14.54	33.66		25.06	291	0.36	
97	14.78	33.64		297	150	12.20	34.10		25.87	214	0.48	
111	13.80	33.73		271	200	11.59	34.37		26.20	183	0.58	
130	12.48	33.82		240	250	10.95	34.41		26.34	169	0.68	
149	12.21	34.09		215	300	10.30	34.46		26.50	154	0.76	
172	12.02	34.25		200	400	8.68	34.40		26.72	133	0.91	
195	11.66	34.36		185	500	7.43	34.40		26.90	116	1.04	
242	11.04	34.40		172								
318	10.02	34.47		150								
413	8.48	34.40		130								
536	7.04	34.40		110								
SPENCER F. BAIRD; January 11, 1959; 0554 GCT; 28°55.5'N, 114°40.5'W; sounding, 41 fm; wind, 350°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.												117.26
1	17.70	33.92		341	0	(17.70)	(33.92)		(24.54)	(341)	(0.00)	
11	17.66	33.91		340	10	17.67	33.91		24.54	340	0.03	
30	17.54	33.88		340	20	17.61	33.90		24.54	340	0.07	
49	17.34	33.87		336	30	17.54	33.88		24.54	340	0.10	
SPENCER F. BAIRD; January 11, 1959; 0402 GCT; 28°48'N, 114°55.5'W; sounding, 55 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 02°.												117.30
1	17.60	33.78		348	0	(17.60)	(33.78)		(24.46)	(348)	(0.00)	
10	17.52	33.82		344	10	17.52	33.82		24.51	344	0.03	
29	17.42	33.82		342	20	17.47	33.82		24.52	342	0.07	
48	17.12	33.85		332	30	17.41	33.82		24.54	341	0.10	
72	13.28	33.66		266	50	17.05	33.86		24.65	330	0.17	
					75	(13.03)	(33.66)		(25.37)	(261)	(0.24)	
SPENCER F. BAIRD; January 11, 1959; 0130 GCT; 28°38'N, 115°16'W; sounding, 110 fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 12°.												117.35
2	17.58	33.77		377	0	(17.58)	(33.77)		(24.16)	(377)	(0.00)	
11	17.51	33.77		375	10	17.53	33.77		24.18	375	0.04	
30	17.33	33.77		366	20	17.44	33.77		24.24	369	0.07	
48	17.14	33.76		363	30	17.33	33.77		24.27	366	0.11	
72	13.70	33.69		272	50	17.09	33.76		24.32	361	0.18	
95	12.05	33.83		231	75	13.37	33.71		25.34	264	0.26	
118	11.66	33.93		217	100	11.98	33.85		25.72	228	0.33	
148	10.88	34.06		194	150	(10.82)	(34.07)		(26.10)	(192)	(0.43)	

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

117.40 SPENCER F. BAIRD; January 10, 1959; 1324 GCT; 28°27.5'N, 115°36.5'W; sounding, 552 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°.

2	17.78	33.80	351	0	(17.78)	(33.80)	(24.43)	(351)	(0.00)
11	17.75	33.80	350	10	17.75	33.80	24.44	350	0.04
30	17.78	33.81	351	20	17.75	33.80	24.44	350	0.07
44	17.42	33.77	345	30	17.78	33.81	24.43	351	0.10
53	16.88	33.75	335	50	17.08	33.75	24.56	339	0.17
62	15.07	33.68	300	75	13.50	33.70	25.30	268	0.25
71	14.71	33.71	291	100	12.39	33.71	25.54	246	0.32
90	12.72	33.70	252	150	10.80	34.03	26.08	194	0.43
104	12.30	33.73	243	200	10.19	34.30	26.39	164	0.52
117	11.82	33.85	225	250	9.80	34.42	26.55	150	0.60
140	11.06	33.99	202	300	9.21	34.42	26.65	140	0.67
168	10.46	34.13	181	400	8.12	34.41	26.82	124	0.81
204	10.16	34.31	163	500	7.05	34.40	26.96	110	0.93
256	9.74	34.42	148						
336	8.82	34.42	134						
436	7.78	34.41	120						
574	6.18	34.40	99						

117.50 SPENCER F. BAIRD; January 10, 1959; 0733, 0759 GCT; 28°07'N, 116°15'W; sounding, 2250 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 24°, 33°.

0	17.90	33.86	350	0	17.90	33.86	24.44	350	0.00
10	17.90	33.78	355	10	17.90	33.78	24.39	355	0.04
28	17.84	33.82	351	20	17.86	33.80	24.40	353	0.07
54	18.20	33.93	352	30	17.84	33.83	24.43	351	0.11
63	18.15	33.96	348	50	18.17	33.91	24.42	352	0.18
72	17.58	33.83	344	75	17.52	33.83	24.50	344	0.26
85	17.46	33.82	342	100	15.68	33.72	24.86	310	0.35
98	15.88	33.72	315	150	11.64	33.89	25.81	220	0.47
110	13.87	33.71	274	200	10.48	34.13	26.22	181	0.58
126	12.06	33.77	236	250	9.58	34.38	26.56	148	0.66
143	11.74	33.86	223	300	8.70	34.38	26.70	135	0.73
169	11.36	33.98	208	400	7.68	34.38	26.86	120	0.87
190	10.63	34.02	192	500	6.79	34.41	27.01	106	0.99
221	10.18	34.34	161						
290	8.84	34.39	137						
386	7.81	34.38	122						
517	6.64	34.42	104						

117.60 SPENCER F. BAIRD; January 10, 1959; 0221 GCT; 27°48.5'N, 116°53'W; sounding, 1970 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 12°.

1	17.88	33.82	352	0	(17.88)	(33.82)	(24.42)	(352)	(0.00)
10	17.85	33.84	350	10	17.85	33.84	24.44	350	0.04
34	17.82	33.82	350	20	17.84	33.83	24.44	350	0.07
62	17.75	33.82	349	30	17.83	33.83	24.44	350	0.10
71	17.48	33.86	340	50	17.79	33.82	24.44	350	0.18
85	16.42	33.89	314	75	17.14	33.86	24.63	332	0.26
94	15.96	33.89	303	100	14.83	33.77	25.08	289	0.34
114	13.64	33.65	274	150	10.48	33.64	25.83	218	0.46
127	11.54	33.58	240	200	9.22	33.83	26.18	184	0.57
146	10.62	33.63	221	250	9.02	34.13	26.45	159	0.66
169	10.00	33.70	206	300	8.42	34.24	26.64	141	0.73
197	9.22	33.81	185	400	7.48	34.34	26.86	121	0.87
224	9.28	34.02	171	500	6.61	34.38	27.01	106	0.99
281	8.62	34.21	147	600	5.83	34.42	27.13	94	1.10
367	7.80	34.32	127						
477	6.80	34.38	108						
621	5.70	34.42	92						

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

SPENCER F. BAIRD; January 9, 1959; 2123 GCT; 27°27.5'N, 117°33'W; sounding, 2020 fm; wind, 360°, force 4; weather, cloudy; sea, rough; wire angle, 20°. 117.70

3	18.06	33.92	349	0	(18.06)	(33.92)	(24.45)	(349)	(0.00)
11	18.04	33.91	349	10	18.04	33.91	24.45	349	0.04
30	17.96	33.91	347	20	18.00	33.91	24.46	348	0.07
57	18.00	33.93	347	30	17.96	33.91	24.47	347	0.10
67	17.87	33.91	345	50	18.03	33.92	24.47	347	0.17
75	17.28	34.06	321	75	17.28	34.06	24.75	321	0.26
88	16.80	34.05	311	100	15.70	33.88	24.98	299	0.34
101	15.60	33.87	298	150	10.60	33.67	25.84	218	0.47
115	14.88	33.91	280	200	9.11	33.90	26.26	177	0.57
132	12.07	33.63	246	250	8.20	34.07	26.54	151	0.65
146	10.85	33.66	222	300	7.90	34.18	26.67	138	0.73
177	9.63	33.78	194	400	7.02	34.29	26.88	118	0.86
199	9.12	33.90	177	500	6.32	34.34	27.01	106	0.98
249	8.22	34.07	151						
326	7.75	34.22	133						
427	6.80	34.31	114						
559	6.03	34.37	100						

SPENCER F. BAIRD; January 9, 1959; 1634 GCT; 27°09'N, 118°13.5'W; sounding, 2140 fm; wind, 360°, force 4; weather, cloudy; sea, moderate; wire angle, 09°. 117.80

1	18.62	33.99	358	0	(18.62)	(33.99)	(24.36)	(358)	(0.00)
10	18.62	33.97	359	10	18.62	33.97	24.35	359	0.04
29	18.54	34.04	352	20	18.59	34.01	24.38	355	0.07
43	18.46	34.05	348	30	18.53	34.04	24.43	351	0.11
53	18.36	34.05	346	50	18.40	34.05	24.47	347	0.18
62	18.34	34.04	347	75	18.25	34.03	24.48	346	0.26
71	18.24	34.02	346	100	16.48	34.02	24.90	306	0.35
90	16.93	34.06	313	150	10.97	33.60	25.72	228	0.48
105	15.92	33.96	298	200	9.63	33.85	26.14	189	0.59
119	14.60	33.82	281	250	8.90	34.17	26.51	153	0.68
142	11.38	33.60	236	300	8.35	34.25	26.66	140	0.75
170	10.19	33.67	211	400	7.33	34.30	26.85	121	0.89
207	9.52	33.92	182	500	6.41	34.32	26.99	108	1.01
258	8.80	34.20	150						
340	7.94	34.28	131						
438	6.95	34.31	116						
575	5.90	34.35	100						

SPENCER F. BAIRD; January 9, 1959; 1157 GCT; 26°49.5'N, 118°53.5'W; sounding, 2145 fm; wind, 340°, force 2; weather, clear; sea, rough; wire angle, 07°. 117.90

1	18.78	34.00	361	0	(18.78)	(34.00)	(24.32)	(361)	(0.00)
10	18.76	33.96	363	10	18.76	33.96	24.30	363	0.04
29	18.76	34.00	360	20	18.76	33.98	24.32	362	0.07
53	18.64	33.98	358	30	18.76	34.00	24.34	360	0.11
62	18.64	34.04	354	50	18.65	33.99	24.34	359	0.18
72	18.55	34.03	353	75	18.50	34.01	24.42	352	0.27
81	17.51	33.84	342	100	15.55	33.80	24.95	302	0.35
95	16.16	33.84	312	150	10.76	33.73	25.85	216	0.48
110	14.11	33.66	382	200	9.85	34.04	26.25	178	0.58
128	12.22	33.66	246	250	8.80	34.15	26.50	154	0.67
147	10.86	33.71	219	300	8.30	34.24	26.66	140	0.74
172	10.34	33.89	197	400	7.53	34.33	26.84	122	0.88
195	9.94	34.02	181	500	6.67	34.36	26.99	108	1.00
241	8.94	34.13	157						
317	8.16	34.26	136						
413	7.43	34.34	120						
537	6.34	34.38	103						

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
118.39	SPENCER F. BAIRD; January 10, 1959; 1546 GCT; 28°18.5'N, 115°24'W; sounding, 120 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 08°.										
2	17.54	33.84	343		0	(17.54)	(33.84)		(24.52)	(343)	(0.00)
11	17.55	33.84	343		10	17.55	33.84		24.52	343	0.04
30	17.56	33.84	343		20	17.55	33.84		24.52	343	0.07
49	17.28	33.82	338		30	17.56	33.84		24.52	343	0.10
73	15.48	33.82	299		50	17.23	33.82		24.57	338	0.17
96	12.48	33.75	245		75	15.39	33.82		25.00	297	0.25
120	11.50	33.87	218		100	12.26	33.76		25.60	240	0.32
158	10.67	34.16	182		150	10.80	34.10		26.14	189	0.43
197	10.22	34.29	166		200	(10.19)	(34.30)		(26.39)	(164)	(0.52)
119.33	SPENCER F. BAIRD; January 11, 1959; 1428 GCT; 28°17.5'N, 114°54.5'W; sounding, 65 fm; wind, 290°, force 3; weather, partly cloudy; sea, moderate; wire angle, 04°.										
1	18.43	33.90	359		0	(18.43)	(33.90)		(24.34)	(359)	(0.00)
11	18.46	33.92	359		10	18.45	33.92		24.35	359	0.04
30	18.44	33.92	358		20	18.45	33.92		24.35	359	0.07
49	18.37	33.93	356		30	18.44	33.92		24.36	358	0.11
72	17.87	33.86	349		50	18.36	33.93		24.38	356	0.18
97	13.38	33.79	259		75	17.60	33.84		24.50	344	0.27
					100	(13.20)	(33.80)		(25.44)	(255)	(0.34)
120.25	SPENCER F. BAIRD; January 11, 1959; 1011 GCT; 28°22.5'N, 114°15.5'W; sounding, 35 fm; wind, 010°, force 2; weather, clear; sea, moderate; wire angle, 03°.										
2	17.82	33.87	347		0	(17.82)	(33.87)		(24.47)	(347)	(0.00)
12	17.78	33.87	346		10	17.79	33.87		24.48	346	0.03
31	17.67	33.90	342		20	17.73	33.88		24.50	344	0.07
40	17.60	33.89	336		30	17.68	33.90		24.52	342	0.10
120.30	SPENCER F. BAIRD; January 11, 1959; 1222 GCT; 28°12'N, 114°34.5'W; sounding, 50 fm; wind, 010°, force 2; weather, clear; sea, moderate; wire angle, 05°.										
1	18.00	33.88	351		0	(18.00)	(33.88)		(24.43)	(351)	(0.00)
10	17.98	33.87	351		10	17.98	33.87		24.43	351	0.04
29	18.00	33.89	350		20	17.99	33.88		24.44	350	0.07
49	17.62	33.87	342		30	18.00	33.89		24.44	350	0.10
73	14.96	33.75	292		50	17.60	33.87		24.52	342	0.17
					75	(14.90)	(33.75)		(25.05)	(292)	(0.25)
120.35	SPENCER F. BAIRD; January 11, 1959; 1623 GCT; 28°02.5'N, 114°54'W; sounding, 47 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 03°.										
1	18.29	33.95	352		0	(18.29)	(33.95)		(24.42)	(352)	(0.00)
11	18.26	33.95	352		10	18.26	33.95		24.43	352	0.04
30	18.22	33.95	350		20	18.24	33.95		24.43	352	0.07
49	17.75	34.00	336		30	18.22	33.95		24.44	350	0.10
73	15.61	33.75	307		50	17.71	34.00		24.60	336	0.17
					75	(15.50)	(33.73)		(24.92)	(305)	(0.25)

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; January 12, 1959; 0633 GCT; 27°43'N, 115°33'W; sounding, 1250 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 08°. 120.45

2	18.18	33.97	–	348	0	(18.18)	(33.97)		(24.46)	(348)	(0.00)
11	18.17	34.04	–	343	10	18.17	34.04		24.52	343	0.03
30	18.16	34.02	–	344	20	18.17	34.03		24.52	343	0.07
44	16.65	33.79	–	326	30	18.16	34.02		24.50	344	0.10
53	15.12	33.71	–	300	50	15.60	33.73		24.88	308	0.17
63	14.22	33.71	–	281	75	13.83	33.78	3.46	25.30	268	0.24
72	13.98	33.78	3.52	271	100	12.16	33.80	3.11	25.65	235	0.30
91	12.70	33.78	3.31	247	150	10.50	34.20	1.93	26.27	176	0.41
106	11.81	33.86	2.81	224	200	10.15	34.38	1.12	26.46	157	0.49
119	11.23	34.00	2.36	204	250	9.50	34.40	0.86	26.59	146	0.57
143	10.50	34.14	2.10	181	300	8.82	34.40	0.67	26.69	136	0.64
172	10.50	34.33	1.33	167	400	7.58	34.38	0.42	26.86	120	0.78
209	10.03	34.39	1.08	156	500	6.70	34.38	0.29	27.00	107	0.89
262	9.34	34.40	0.79	144	600	(5.82)	(34.42)		(27.14)	(94)	(1.00)
343	8.22	34.40	0.52	127							
443	7.18	34.37	0.33	114							
581	6.00	34.41	0.25	96							

SPENCER F. BAIRD; January 12, 1959; 0923 GCT; 27°32.5'N, 115°53.5'W; sounding, 2000+ fm; wind, 020°, force 3; weather, cloudy; sea, moderate; wire angle, 23°. 120.50

3	18.45	5.06	0	(18.45)	(5.06)	
11	18.45	5.06	10	18.45	5.06	
29	18.40	5.09	20	18.43	5.06	
55	16.92	4.21	30	18.40	5.09	
65	15.22	3.79	50	18.22	4.47	
72	14.18	4.39	75	13.74	4.25	
84	13.13	3.82	100	12.55	3.54	
98	12.67	3.59	150	10.88	2.37	
109	12.06	3.38	200	10.43	1.32	
123	11.68	2.91	250	9.50	1.22	
139	11.40	2.58	300	8.75	1.20	
161	10.40	2.18	400	7.77	0.79	
180	10.73	1.46	500	6.91	0.53	
222	10.02	1.22				
289	8.89	1.22				
380	7.94	0.84				
504	6.87	0.52				

SPENCER F. BAIRD; January 12, 1959; 1426 GCT; 27°14'N, 116°34.5'W; sounding, 2060 fm; wind, calm; weather, cloudy; sea, rough; wire angle, 05°. 120.60

2	18.27	33.96	4.57	350	0	(18.27)	(33.96)	(4.57)	(24.44)	(350)	(0.00)
11	18.24	33.95	4.69	351	10	18.24	33.95	4.69	24.43	351	0.04
30	18.23	33.95	4.40	351	20	18.24	33.95	4.56	24.43	351	0.07
54	17.63	33.91	4.70	340	30	18.23	33.95	4.40	24.43	351	0.10
64	16.84	33.93	4.10	321	50	17.95	33.93	4.57	24.48	346	0.17
73	16.02	33.93	4.58	302	75	15.85	33.93	4.54	24.98	299	0.26
82	15.09	33.90	4.25	285	100	13.92	33.74	4.04	25.26	272	0.33
97	14.08	33.75	4.10	275	150	11.09	33.91	2.69	25.93	208	0.45
111	13.22	33.73	3.76	260	200	9.96	34.13	2.00	26.30	173	0.55
131	11.90	33.77	3.16	232	250	9.26	34.23	1.66	26.49	155	0.63
150	11.09	33.91	2.69	208	300	8.68	34.28	1.30	26.63	142	0.71
173	10.82	34.04	2.17	194	400	7.72	34.38	0.56	26.85	121	0.85
197	10.01	34.12	2.02	175	500	6.79	34.39	0.33	26.99	108	0.96
244	9.34	34.22	1.70	157							
321	8.43	34.30	1.12	137							
415	7.59	34.39	0.49	119							
538	6.44	34.39	0.27	104							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

120.70 SPENCER F. BAIRD; January 12, 1959; 1844 GCT; 26°50.5'N, 117°14'W; sounding, 2160 fm; wind, direction missing, force 1; weather, cloudy; sea, rough; wire angle, 08°.

0	18.54	33.97	4.78	357	0	18.54	33.97	4.78	24.37	357	0.00
11	18.47	33.98	4.83	354	10	18.48	33.98	4.83	24.39	355	0.04
30	18.46	34.00	4.45	352	20	18.47	33.99	4.66	24.40	353	0.07
54	18.44	34.01	4.07	352	30	18.46	34.00	4.45	24.42	352	0.11
63	18.06	33.96	4.54	346	50	18.46	34.01	4.23	24.42	352	0.18
72	16.48	33.81	4.38	321	75	16.32	33.80	4.33	24.78	318	0.26
82	15.88	33.78	4.18	310	100	14.12	33.72	4.21	25.20	278	0.34
96	14.40	33.73	4.29	283	150	11.02	33.89	2.81	25.93	208	0.46
110	13.37	33.71	3.97	264	200	10.14	34.18	1.86	26.31	172	0.56
128	12.26	33.83	3.14	235	250	9.74	34.40	1.07	26.55	149	0.64
147	11.16	33.88	2.84	211	300	9.00	34.49	0.84	26.74	132	0.71
169	10.28	33.94	2.59	192	400	7.64	34.38	0.49	26.86	120	0.84
192	10.18	34.13	2.01	177	500	6.53	34.35	0.30	26.99	108	0.96
239	9.89	34.36	1.14	155							
313	8.82	34.49	0.78	129							
407	7.56	34.37	0.47	120							
531	6.18	34.34	0.22	104							

120.80 SPENCER F. BAIRD; January 12, 1959; 2302 GCT; 26°30.5'N, 117°49'W; sounding, 2060 fm; wind, 280°, force 1; weather, partly cloudy; sea, rough; wire angle, 08°.

2	19.22	33.95	4.68	374	0	(19.22)	(33.95)	(4.68)	(24.19)	(374)	(0.00)
11	18.86	33.94	4.60	366	10	19.88	33.94	4.61	24.26	367	0.04
30	18.65	33.95	4.41	361	20	19.74	33.94	4.49	24.30	363	0.07
54	18.13	33.93	5.02	350	30	18.65	33.95	4.41	24.32	361	0.11
63	18.24	33.98	4.40	349	50	18.18	33.93	4.96	24.43	351	0.18
72	17.73	33.96	4.94	338	75	17.48	33.96	4.83	24.63	332	0.27
81	16.90	33.98	4.29	318	100	15.05	33.81	4.58	25.06	291	0.35
97	15.44	33.83	4.60	297	150	11.43	33.84	2.95	25.81	220	0.47
110	13.82	33.75	4.43	270	200	9.74	33.97	2.51	26.21	182	0.58
129	12.36	33.75	3.61	242	250	8.90	34.18	1.74	26.52	152	0.66
147	11.50	33.82	3.01	222	300	8.25	34.25	1.28	26.67	138	0.74
170	11.00	33.95	2.50	204	400	7.46	34.37	0.59	26.88	118	0.87
194	9.89	33.94	2.59	186	500	6.56	34.39	0.32	27.02	105	0.99
240	9.04	34.16	1.84	157							
315	8.08	34.27	1.15	134							
411	7.38	33.38	0.52	116							
535	6.23	34.39	0.26	101							

120.90 SPENCER F. BAIRD; January 13, 1959; 0318 GCT; 26°12.5'N, 118°27.5'W; sounding, 2210 fm; wind, 330°, force 1; weather, partly cloudy; sea, rough; wire angle, 15°.

1	19.08	34.02	4.14	366	0	(19.08)	(34.02)	(4.14)	(24.27)	(366)	(0.00)
10	18.86	33.98	4.99	364	10	18.86	33.98	4.99	24.30	364	0.04
29	18.71	33.98	4.69	360	20	18.76	33.98	4.81	24.32	361	0.07
52	18.64	33.98	4.50	358	30	18.70	33.98	4.68	24.34	360	0.11
61	18.56	34.00	4.58	355	50	18.66	33.98	4.52	24.35	359	0.18
70	18.38	34.00	4.63	350	75	18.25	33.99	4.52	24.46	348	0.27
79	18.14	33.99	4.41	345	100	16.14	33.94	4.30	24.93	304	0.35
93	16.56	33.96	4.67	312	150	11.38	33.66	3.90	25.69	231	0.48
107	15.59	33.92	3.83	294	200	9.26	33.89	2.81	26.23	180	0.59
124	13.46	33.87	4.39	254	250	8.93	34.15	1.96	26.48	156	0.68
141	11.83	33.71	4.29	236	300	8.88	34.34	1.03	26.64	141	0.75
163	10.76	33.60	3.06	225	400	7.78	34.38	0.54	26.85	122	0.89
185	9.52	33.80	2.97	190	500	6.65	34.38	0.32	27.00	107	1.01
229	8.96	34.05	2.42	163							
303	8.87	34.35	1.00	140							
394	7.85	34.38	0.56	123							
516	6.48	34.38	0.29	105							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
SPENCER F. BAIRD; January 14, 1959; 1154 GCT; 27°24'N, 114°40'W; sounding, 42 fm; wind, 330°, force 4; weather, clear; sea, moderate; wire angle, 05°.											123.37
1	19.46	34.19	4.89	363	0	(19.46)	(34.19)	(4.89)	(24.30)	(363)	(0.00)
10	19.47	34.20	4.70	362	10	19.47	34.20	4.70	24.31	362	0.04
29	19.18	34.18	4.72	357	20	19.47	34.20	4.70	24.31	362	0.07
48	17.35	33.96	4.61	330	30	19.17	34.18	4.72	24.37	356	0.11
SPENCER F. BAIRD; January 14, 1959; 0537 GCT;[a] 27°14'N, 114°59.5'W; sounding, 1115 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 09°.											123.42
2	18.94	34.14	4.91	354	0	(18.94)	(34.14)	(4.91)	(24.40)	(354)	
10	18.90	34.13	4.66	354	10	18.90	34.13	4.66	24.40	354	
20	18.62	34.11	5.07	349	20	18.62	34.11	5.07	24.45	349	
29	18.52	34.11	4.81	346	30	18.52	34.11	4.81	24.48	346	
38	18.52	34.10	4.76	346	50	18.51	34.10	4.72	24.48	346	
47	18.51	34.10	4.72	346	75	14.10	33.82	3.98	25.27	271	
56	17.46	33.96	4.49	333	100	11.64	33.76	3.53	25.70	230	
66	15.17	33.71	4.12	300	150	11.34	34.31	1.35	26.20	183	
75	14.10	33.82	3.98	271							
84	12.58	33.73	3.84	248							
93	12.22	33.73	3.74	241							
102	11.60	33.77	3.48	228							
112	11.64	33.86	3.30	222							
121	11.60	33.98	2.50	212							
130	11.70	34.20	1.75	198							
138	11.50	34.25	1.55	190							
185	10.98	34.46	0.84	165							
SPENCER F. BAIRD; January 14, 1959; 0632 GCT;[b] 27°14'N, 114°59.5'W; sounding, 1115 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°.											123.42
132	11.66	34.10	2.00	204							
141	11.52	34.18	1.88	196							
150	11.48	34.28	1.44	188							
159	11.38	34.32	1.06	183							
168	11.30	34.41	0.98	175							
177	11.16	34.47	0.73	168							
187	11.02	34.44	0.80	168							
196	10.94	34.43	0.80	167	150	11.42	34.28	1.44	26.14	188	
205	10.84	34.47	0.64	163	200	10.89	34.45	0.73	26.39	165	
215	10.68	34.49	0.67	159	250	9.87	34.48	0.69	26.59	146	
224	10.35	34.47	0.67	154							
234	10.26	34.51	0.66	150							
243	10.00	34.49	0.67	147							
253	9.82	34.45u	0.69								
262	9.70	–	0.70								
271	9.80	34.48	0.60	145							
280	9.64	34.47	0.58	143							

a) Test cast, top.
b) Test cast, middle.

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

123.42 SPENCER F. BAIRD; January 14, 1959; 0730 GCT;[a] 27°14'N, 114°59.5'W; sounding, 1115 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 11°.

262	9.72	34.45	0.74	146						
281	9.35	34.47	0.75	138						
300	9.00	34.42	0.66	137	300	9.00	34.42	0.66	26.68	137
318	8.74	34.38	0.72	136	400	7.99	34.43	0.36	26.85	121
338	8.47	34.40	0.62	130	500	6.90	34.39	0.30	26.97	110
357	8.48	34.45	0.57	127						
375	8.30	34.44	0.47	125						
394	8.03	34.47u	0.35							
413	7.87	34.42	0.33	120						
431	7.68	34.40	0.36	119						
450	7.37	34.40	0.37	115						
469	7.19	34.40	0.33	112						
488	7.00	34.40	0.36	110						
507	6.82	34.38	0.29	110						
526	6.59	34.37	0.28	107						
545	6.46	34.40	0.24	103						
563	6.26	34.37	0.27	103						

123.42 SPENCER F. BAIRD; January 14, 1959; 0833 GCT; 27°14'N, 114°59.5'W; sounding, 1660 fm; wind, 340°, force 3; weather, clear; sea, moderate; wire angle, 07°.

2	18.88	34.05	4.92	359	0	(18.88)	(34.05)	(4.92)	(24.34)	(359)	(0.00)
11	18.90	34.05	4.76	360	10	18.90	34.05	4.76	24.34	360	0.04
30	18.73	34.11	4.92	351	20	18.75	34.09	4.88	24.42	352	0.07
39	18.52	34.18	4.70	341	30	18.73	34.11	4.92	24.43	351	0.11
49	18.46	34.17	4.61	340	50	18.45	34.17	4.60	24.55	340	0.18
58	15.82	33.75	4.30	311	75	13.95	33.78	3.56	25.27	271	0.25
67	14.53	33.69	3.79	288	100	11.97	33.66	2.75	25.58	242	0.32
81	13.50	33.80	3.39	260	150	11.26	34.26	1.46	26.18	185	0.42
96	12.30	33.69	2.90	246	200	10.82	34.49	0.71	26.43	161	0.51
110	11.45	33.69	2.48	231	250	9.92	34.49	0.61	26.59	146	0.59
133	11.24	34.07	2.19	199	300	9.16	34.43	0.58	26.67	138	0.66
162	11.25	34.36	1.09	178	400	8.08	34.42	0.41	26.83	123	0.80
194	10.91	34.48	0.73	163	500	6.97	34.41	0.30	26.98	108	0.92
242	10.07	34.51	0.62	147						
318	8.91	34.42	0.56	135						
414	7.96	34.42	0.39	121						
538	6.46	34.40	0.27	103						

123.50 SPENCER F. BAIRD; January 13, 1959; 2355 GCT; 26°56'N, 115°37'W; sounding, 1830 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 30°.

2	18.99	34.01	4.85	364	0	(18.99)	(34.01)	(4.85)	(24.29)	(364)	(0.00)
10	18.98	34.00	4.85	365	10	18.98	34.00	4.85	24.28	365	0.04
26	18.00	33.89	4.93	350	20	18.49	33.92	4.87	24.34	360	0.07
52	18.12	34.05	4.61	340	30	18.00	33.92	4.88	24.46	348	0.11
60	16.36	33.76	4.72	322	50	18.11	34.04	4.63	24.53	342	0.18
69	15.16	33.70	4.63	301	75	14.70	33.74	4.35	25.08	289	0.26
80	14.30	33.77	4.08	278	100	12.43	33.67	3.82	25.49	250	0.32
93	12.70	33.66	3.72	255	150	10.55	34.03	2.41	26.12	190	0.44
104	12.28	33.68	3.85	246	200	9.69	34.20	1.86	26.40	164	0.52
120	11.52	33.75	3.41	227	250	9.46	34.36	1.25	26.56	148	0.60
134	11.04	33.91	2.74	208	300	8.89	34.38	0.87	26.68	137	0.68
158	10.27	34.05	2.32	184	400	7.56	34.41	0.47	26.90	116	0.81
178	9.76	34.09	2.17	173	500	6.70	34.42	0.28	27.03	104	0.93
220	9.66	34.29	1.57	157						
291	8.99	34.38	0.91	140						
384	7.76	34.41	0.51	119						
510	6.62	34.42	0.26	103						

a) Test cast, bottom.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
SPENCER F. BAIRD; January 13, 1959; 1844 GCT; 26°39.5'N, 116°14.5'W; sounding, 2130 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 07°.											123.60
1	19.15	33.95	4.80	372	0	(19.15)	(33.95)	(4.80)	(24.20)	(372)	(0.00)
10	19.10	33.94	4.72	372	10	19.10	33.94	4.72	24.21	372	0.04
29	19.08	33.93	4.56	372	20	19.09	33.93	4.66	24.21	372	0.07
57	18.21	33.87	4.74	356	30	19.07	33.93	4.56	24.21	372	0.11
67	15.82	33.69	4.58	316	50	19.05	33.92	4.56	24.21	372	0.19
76	14.62	33.66	4.23	293	75	14.75	33.66	4.29	25.02	295	0.27
90	13.24	33.68	3.54	264	100	12.52	33.67	3.44	25.48	251	0.34
105	12.23	33.69	3.37	245	150	10.36	33.87	2.62	26.03	199	0.45
119	11.56	33.78	3.25	226	200	9.83	34.21	1.63	26.38	165	0.54
138	10.83	33.87	2.72	207	250	9.42	34.37	0.95	26.58	147	0.62
157	10.19	33.89	2.52	194	300	8.92	34.42	0.68	26.70	135	0.70
185	10.11	34.16	1.71	173	400	7.56	34.39	0.46	26.88	118	0.83
209	9.66	34.23	1.62	161	500	6.54	34.39	0.30	27.03	104	0.94
262	9.36	34.40	0.82	143	600	(5.82)	(34.43)	(0.27)	(27.14)	(93)	(1.05)
343	8.33	34.42	0.58	126							
447	7.00	34.38	0.38	111							
581	5.98	34.42	0.27	95							
SPENCER F. BAIRD; January 13, 1959; 1408 GCT; 26°20'N, 116°51.5'W; sounding, 2025 fm; wind, 340°, force 2; weather, partly cloudy; sea, rough; wire angle, 18°.											123.70
2	18.74	33.97	4.89	362	0	(18.74)	(33.97)	(4.89)	(24.32)	(362)	(0.00)
11	18.76	33.96	4.89	362	10	18.76	33.96	4.89	24.31	362	0.04
29	18.55	34.00	4.95	355	20	18.68	33.97	4.90	24.34	360	0.07
52	16.34	33.72	4.89	325	30	18.54	33.99	4.96	24.39	354	0.11
61	15.66	33.76	4.61	307	50	16.80	33.77	4.91	24.64	331	0.18
70	15.00	33.70	4.61	298	75	14.56	33.70	4.36	25.08	289	0.25
78	14.26	33.69	4.18	283	100	12.27	33.66	3.80	25.51	248	0.32
92	13.10	33.64	4.07	264	150	10.47	34.00	2.47	26.11	191	0.43
105	11.84	33.68	3.60	238	200	10.06	34.30	1.29	26.42	162	0.52
123	11.12	33.79	2.97	217	250	9.68	34.42	0.90	26.58	147	0.60
141	10.49	33.88	2.90	200	300	9.04	34.43	0.65	26.68	137	0.68
163	10.46	34.16	1.84	179	400	7.64	34.39	0.41	26.87	119	0.81
184	10.12	34.25	1.42	167	500	6.60	34.40	0.28	27.02	105	0.92
227	9.96	34.40	1.02	153							
297	9.08	34.43	0.66	137							
385	7.80	34.39	0.42	121							
509	6.51	34.40	0.27	104							
SPENCER F. BAIRD; January 13, 1959; 0904, 0938 GCT; 25°59.5'N, 117°26'W; sounding, 2070 fm; wind, 350°, force 3; weather, partly cloudy; sea, rough; wire angle, 08°, 05°.											123.80
2	18.99	33.95	4.81	369	0	(18.99)	(33.95)	(4.81)	(24.24)	(369)	(0.00)
11	19.00	33.94	4.85	370	10	19.00	33.94	4.85	24.23	370	0.04
30	18.94	33.93	4.92	369	20	18.97	33.94	4.87	24.23	370	0.07
58	18.94	33.94	4.89	368	30	18.94	33.93	4.92	24.24	369	0.11
67	17.86	33.82	4.76	352	50	18.94	33.93	4.90	24.24	369	0.18
76	16.40	33.77	4.52	322	75	16.48	33.77	4.52	24.71	325	0.27
91	14.64	33.82	4.96	282	100	13.45	33.77	4.38	25.37	261	0.35
104	12.96	33.75	4.12	253	150	11.07	33.90	2.69	25.92	209	0.46
118	12.26	33.73	3.68	242	200	10.38	34.22	1.78	26.30	173	0.56
134	11.39	33.82	3.05	220	250	9.75	34.40	1.00	26.55	150	0.64
					300	9.02	34.39	0.75	26.66	139	0.72
157	10.93	33.95	2.48	202	400	7.71	34.36	0.54	26.83	123	0.86
186	10.41	34.13	1.99	180	500	6.71	34.38	0.36	26.99	108	0.98
209	10.36	34.27	1.64	169							
262	9.56	34.42	0.84	145							
341	8.42	34.36	0.67	133							
445	7.19	34.36	0.44	116							
577	6.04	34.40	0.22	98							

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	OBSERVED				INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
127.34	SPENCER F. BAIRD; January 15, 1959; 0650 GCT; 26°55.5'N, 114°06'W; sounding, 48 fm; wind, 010°, force 3; weather, clear; sea, moderate; wire angle, 06°.											
	0	19.50	34.34a)	4.76	353	0	19.50	34.34	4.76	24.41	353	0.00
	11	19.50	34.36	4.76	352	10	19.50	34.36	4.76	24.42	352	0.04
	30	19.64	34.44	4.58	349	20	19.58	34.40	4.68	24.44	350	0.07
	49	19.46	34.40	4.56	347	30	19.64	34.44	4.58	24.45	349	0.10
	73	17.20	34.16	3.43	312	50	19.45	34.40	4.56	24.47	347	0.17
						75	(17.04)	(34.15)	(3.36)	(24.87)	(309)	(0.26)
127.40	SPENCER F. BAIRD; January 15, 1959; 0943 GCT; 26°42.5'N, 114°30.5'W; sounding, 1750 fm; wind, 360°, force 3; weather, clear; sea, rough; wire angle, 15°.											
	2	19.92	34.45	4.65	355	0	(19.92)	(34.45)	(4.65)	(24.39)	(355)	(0.00)
	10	19.92	34.43	4.72	356	10	19.92	34.43	4.72	24.38	356	0.04
	29	19.92	-	4.74		20	19.92	34.43	4.72	24.38	356	0.07
	57	19.79	34.42	4.56	354	30	19.92	34.43	4.74	24.38	356	0.11
	66	18.02	34.23	3.78	326	50	19.86	34.42	4.60	24.39	355	0.18
	75	16.31	34.01	3.48	302	75	16.31	34.01	3.48	24.94	302	0.26
	89	13.76	33.86	3.41	261	100	13.35	33.96	2.88	25.54	245	0.33
	103	13.26	33.98	2.74	242	150	11.84	34.25	1.63	26.06	196	0.44
	117	13.18	34.14	2.12	229	200	10.73	34.48	0.89	26.44	160	0.53
	135	12.14	34.13	1.92	212	250	10.11	34.52	0.57	26.58	147	0.61
	153	11.72	34.27	1.52	192	300	9.56	34.49	0.47	26.65	140	0.68
	180	11.18	34.40	1.04	173	400	8.14	34.44	0.40	26.84	122	0.82
	202	10.70	34.49	0.87	159	500	6.90	34.44	0.29	27.02	105	0.94
	253	10.08	34.52	0.56	147							
	331	9.16	34.47	0.46	135							
	434	7.64	34.44	0.36	116							
	565	6.33	34.45	0.20	97							
127.50	SPENCER F. BAIRD; January 15, 1959; 1454 GCT; 26°21'N, 115°11.5'W; sounding, 1850 fm; wind, 350°, force 4; weather, partly cloudy; sea, very rough; wire angle, 25°.											
	2	18.91	33.98	4.34	364	0	(18.91)	(33.98)	(4.34)	(24.29)	(364)	(0.00)
	10	18.90	33.95	4.80	366	10	18.90	33.95	4.80	24.27	366	0.04
	32	18.91	33.98	4.54	364	20	18.91	33.96	4.70	24.28	366	0.07
	41	18.83	33.98	4.54	363	30	18.91	33.98	4.54	24.29	364	0.11
	54	18.60	34.11	4.31	348	50	18.80	34.00	4.51	24.33	360	0.18
	63	18.58	34.11	3.88	348	75	17.75	34.05	4.02	24.62	333	0.27
	72	18.33	34.08	4.20	343	100	15.20	33.78	3.87	25.02	295	0.35
	89	16.98	33.96	3.81	321	150	11.39	33.75	3.32	25.75	225	0.48
	105	14.39	33.71	3.90	284	200	10.23	34.18	1.69	26.29	174	0.58
	118	13.44	33.68	4.03	268	250	9.54	34.31	1.48	26.51	153	0.66
	138	11.86	33.64	3.89	241	300	9.04	34.39	0.96	26.66	139	0.74
	168	10.75	33.94	2.46	200	400	7.89	34.40		26.84	122	0.87
	199	10.25	34.18	1.70	174	500	7.00	34.44		27.00	107	1.00
	246	9.58	34.30	1.51	154							
	320	8.82	34.42	0.72	134							
	418	7.69	34.40	1.48u	119							
	555	6.52	34.45	0.35	100							

a) Salinity bottle numbers were not recorded on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; January 15, 1959; 1933 GCT; 26°03'N, 115°46.5'W; sounding, 2085 fm; wind, 360°, force 4; weather, cloudy; sea, very rough; wire angle, 15°. 127.60

2	19.40	34.09	4.72	369	0	(19.40)	(34.09)	(4.72)	(24.24)	(369)	(0.00)
10	19.38	34.06	4.40	370	10	19.38	34.06	4.40	24.22	370	0.04
34	19.35	34.06	4.60	370	20	19.37	34.06	4.50	24.23	370	0.07
61	19.28	34.04	4.79	370	30	19.36	34.06	4.58	24.23	370	0.11
71	17.00	33.82	5.02	332	50	19.33	34.05	4.76	24.24	370	0.18
84	15.69	33.84	4.34	302	75	16.61	33.83	4.84	24.73	323	0.27
93	14.44	33.73	4.38	284	100	13.98	33.74	4.34	25.24	274	0.35
112	13.12	33.74	4.29	260	150	10.72	33.74	3.40	25.87	214	0.47
125	12.24	33.66	4.23	247	200	9.46	34.06	2.50	26.33	170	0.57
143	11.00	33.68	3.59	224	250	8.81	34.22	2.00	26.56	149	0.65
166	10.01	33.89	2.97	192	300	8.43	34.34	1.22	26.71	134	0.73
193	9.58	34.03	2.61	174	400	7.63	34.42	0.68	26.90	117	0.86
219	9.10	34.12	2.12	161	500	6.71	34.41	0.33	27.02	105	0.97
275	8.60	34.29	1.40	140	600	6.04	34.43	0.28	27.12	95	1.08
361	8.02	34.43	0.86	122							
469	6.91	34.40	0.37	108							
612	5.96	34.44	0.27	93							

SPENCER F. BAIRD; January 16, 1959; 0010 GCT; 25°43.5'N, 116°26'W; sounding, 2130 fm; wind, 010°, force 3; weather, cloudy; sea, very rough; wire angle, 12°. 127.70

2	19.21	34.04	4.97	368	0	(19.21)	(34.04)	(4.97)	(24.25)	(368)	(0.00)
11	19.20	34.02	4.99	369	10	19.20	34.02	4.99	24.24	369	0.04
34	19.08	34.02	4.80	366	20	19.17	34.02	4.90	24.25	368	0.07
62	18.96	34.02	4.80	363	30	19.11	34.02	4.84	24.26	367	0.11
71	17.34	33.81	4.92	340	50	19.03	34.02	4.80	24.28	365	0.18
85	16.09	33.88	5.00	308	75	16.98	33.82	4.94	24.64	331	0.27
94	15.16	33.75	4.73	297	100	14.60	33.74	4.56	25.11	286	0.35
114	13.25	33.73	4.18	260	150	10.56	33.83	3.06	25.96	205	0.47
127	11.70	33.68	4.14	236	200	9.48	34.16	1.97	26.41	163	0.57
145	10.70	33.80	3.17	210	250	9.02	34.28	1.65	26.58	147	0.64
168	10.06	33.93	2.75	190	300	8.60	34.35	1.30	26.70	135	0.72
195	9.58	34.14	2.01	166	400	7.28	34.38	0.87	26.91	115	0.85
222	9.12	34.22	1.82	153	500	6.43	34.45	0.35	27.09	98	0.96
278	8.90	-	-		600	5.78	34.47	0.28	27.19	89	1.06
361	7.66	34.35	1.11	122							
469	6.64	34.44	0.42	102							
609	5.72	34.47	0.27	88							

SPENCER F. BAIRD; January 16, 1959; 0439 GCT; 25°24'N, 117°02'W; sounding, 2050 fm; wind, 030°, force 4; weather, partly cloudy; sea, very rough; wire angle, 18°. 127.80

2	20.36	34.18	4.43	386	0	(20.36)	(34.18)	(4.43)	(24.06)	(386)	(0.00)
11	20.36	34.22	4.80	383	10	20.36	34.22	4.78	24.10	383	0.04
29	20.32	34.21	4.76	383	20	20.33	34.21	4.78	24.10	383	0.08
56	20.27	34.18	4.58	384	30	20.31	34.21	4.75	24.10	383	0.11
65	20.20	34.15	4.89	384	50	20.28	34.18	4.61	24.08	384	0.19
74	16.76	33.80	4.89	328	75	16.59	33.80	4.84	24.72	324	0.28
88	15.39	33.80	4.46	298	100	14.13	33.75	4.06	25.23	275	0.36
101	13.93	33.75	4.01	272	150	11.30	34.00	2.20	25.97	205	0.48
115	12.50	33.73	3.81	246	200	10.14	34.23	1.62	26.35	169	0.57
133	11.68	33.81	3.10	226	250	9.78	34.36	1.00	26.52	153	0.66
151	11.28	34.02	2.13	204	300	9.09	34.44	0.50	26.69	136	0.73
179	10.80	34.22	1.70	180	400	8.04	34.43	0.36	26.84	122	0.86
201	10.12	34.23	1.60	168	500	7.03	34.42	0.30	26.98	108	0.98
252	9.76	34.37	0.98	152							
309	8.98	34.45	0.46	134							
431	7.72	34.42	0.33	118							
560	6.42	34.42	0.27	101							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
130.30	SPENCER F. BAIRD; January 17, 1959; 0510 GCT; 26°29'N, 113°29'W; sounding, 44 fm; wind, 250°, force 2; weather, clear; sea, slight; wire angle, 01°.										
1	20.27	34.43	4.83	366	0	(20.27)	(34.43)	(4.83)	(24.27)	(366)	(0.00)
10	20.26	34.39	4.83	368	10	20.26	34.39	4.83	24.25	368	0.04
29	20.32	34.47	4.56	364	20	20.30	34.41	4.71	24.26	367	0.07
49	18.92	34.31	3.19	341	30	20.31	34.47	4.55	24.30	363	0.11
130.35	SPENCER F. BAIRD; January 17, 1959; 0214 GCT; 26°17'N, 113°54'W; sounding, 600 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°.										
1	19.96	34.33	4.43	365	0	(19.96)	(34.33)	(4.43)	(24.28)	(365)	(0.00)
10	19.94	34.30	4.76	366	10	19.94	34.30	4.76	24.27	366	0.04
29	19.93	34.34	4.77	363	20	19.96	34.31	4.76	24.28	365	0.07
53	19.32	34.23	4.65	356	30	19.93	34.34	4.77	24.30	363	0.11
62	18.06	34.07	4.50	338	50	19.63	34.30	4.70	24.34	359	0.18
80	15.18	33.95	3.56	283	75	15.60	33.95	3.75	25.05	292	0.26
95	15.15	34.14	2.54	268	100	15.00	34.14	2.52	25.33	265	0.34
109	13.86	34.03	2.64	250	150	12.60	34.46	1.10	26.05	195	0.45
127	12.68	34.11	2.15	222	200	11.48	34.51	0.69	26.33	170	0.54
147	12.69	34.45	1.17	197	250	10.58	34.52	0.52	26.50	154	0.63
169	12.19	34.50	0.86	184	300	9.79	34.53	0.46	26.64	141	0.70
193	11.62	34.51	0.71	173	400	8.32	34.46	0.38	26.82	124	0.84
239	10.74	34.52	0.53	157	500	7.25	34.42	0.30	26.96	112	0.96
316	9.54	34.53	0.44	137							
411	8.18	34.45	0.38	122							
534	6.90	34.41	0.27	108							
130.40	SPENCER F. BAIRD; January 16, 1959; 2331 GCT; 26°08'N, 114°11.5'W; sounding, 1600 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°.										
2	21.15	34.46	–	386	0	(21.15)	(34.46)		(24.06)	(386)	(0.00)
12	20.85	34.40	–	382	10	21.15	34.47		24.07	385	0.04
30	20.25	34.40	–	367	20	20.28	34.38		24.23	370	0.08
55	20.16	34.39	–	366	30	20.25	34.40		24.26	367	0.11
64	19.81	34.33	–	362	50	20.20	34.39		24.27	366	0.19
73	19.82	34.39	4.76	357	75	19.75	34.39	4.74	24.38	355	0.28
82	17.68	34.00	4.43	335	100	15.00	33.90	4.56	25.14	283	0.36
97	15.58	33.93	3.58	292	150	11.08	34.01	2.20	26.01	201	0.48
111	12.75	33.73	3.54	250	200	10.44	34.29	1.44	26.34	169	0.57
130	11.68	33.86	2.83	222	250	10.37	34.49	0.70	26.52	153	0.65
149	11.12	34.00	2.21	202	300	9.39	34.44	0.69	26.64	141	0.73
173	10.64	34.12	1.97	185	400	8.05	34.45	0.44	26.86	120	0.86
196	10.44	34.27	1.50	171	500	7.06	34.45	0.30	27.00	107	0.98
243	10.44	34.49	0.72	155							
318	9.06	34.43	0.67	137							
412	7.90	34.45	0.40	118							
534	6.74	34.45	0.27	102							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

SPENCER F. BAIRD; January 16, 1959; 1843 GCT; 25°50.5'N, 114°46'W; sounding, 1930 fm; wind, 360°, force 2; weather, cloudy; sea, rough; wire angle, 05°. 130.50

2	21.29	34.40	4.67	394	0	(21.29)	(34.40)	(4.67)	(23.98)	(394)	(0.00)	
11	21.26	34.43	4.75	391	10	21.26	34.43	4.75	24.01	391	0.04	
30	21.26	34.40	4.67	393	20	21.26	34.42	4.70	24.00	392	0.08	
59	21.25	34.41	4.43	392	30	21.26	34.40	4.67	23.99	393	0.12	
68	21.20	34.38	4.36	393	50	21.26	34.41	4.50	24.00	392	0.20	
78	17.68	33.90	4.94	342	75	19.10	34.08	4.73	24.32	362	0.29	
92	14.86	33.92	4.16	278	100	14.20	33.82	3.99	25.26	272	0.37	
106	13.74	33.76	3.83	268	150	11.53	34.02	2.35	25.93	208	0.49	
121	12.76	33.78	3.28	247	200	10.60	34.22	1.38	26.26	177	0.59	
139	11.62	33.97	2.74	213	250	10.17	34.25	0.88	26.36	168	0.68	
158	11.46	34.06	2.02	204	300	9.75	34.38	0.64	26.53	152	0.76	
187	10.64	34.22a)	1.62	178	400	8.98	34.55	0.33	26.80	126	0.91	
212	10.54	34.22a)	1.17	176	500	7.88	34.56	0.20	26.97	110	1.03	
264	10.02	34.27	0.80	164	600	(6.40)	(34.50)		(27.13)	(94)	(1.14)	
345	9.39	34.51	0.49	136								
449	8.60	34.58	0.22	119								
583	6.66	34.51	0.18	97								

SPENCER F. BAIRD; January 16, 1959; 1335 GCT; 25°30'N, 115°27.5'W; sounding, 2080 fm; wind, 010°, force 3; weather, clear; sea, very rough; wire angle, 18°. 130.60

1	21.01	34.41	4.70	386	0	(21.01)	(34.41)	(4.70)	(24.06)	(386)	(0.00)	
10	21.01	34.39	4.67	387	10	21.01	34.39	4.67	24.05	387	0.04	
33	21.00	34.36	4.82	390	20	21.01	34.37	4.79	24.03	389	0.08	
41	20.22	34.30	4.85	374	30	21.00	34.36	4.82	24.02	390	0.12	
55	19.51	34.16	4.89	366	50	20.02	34.26	4.86	24.21	372	0.19	
64	17.33	33.86	4.85	336	75	15.68	33.84	4.62	24.96	301	0.28	
73	15.88	33.85	4.69	305	100	12.72	33.71	3.84	25.47	252	0.35	
91	14.07	33.77	4.08	274	150	10.89	33.92	2.65	25.98	204	0.46	
109	12.42	33.70	3.78	248	200	11.03	34.44	0.97	26.36	168	0.56	
124	11.82	33.74	3.41	233	250	10.47	34.52	0.59	26.52	152	0.64	
145	10.88	33.87	2.81	208	300	9.66	34.52	0.47	26.66	139	0.72	
180	11.08	34.33	1.22	177	400	8.29	34.46	0.38	26.83	123	0.85	
213	10.96	34.49	0.82	163	500	7.25	34.42	0.32	26.95	111	0.98	
265	10.25	34.53	0.51	148	600	(6.25)	(34.44)	(0.24)	(27.10)	(97)	(1.09)	
346	8.88	34.51	0.40	128								
451	7.74	34.42	0.36	118								
591	6.34	34.43	0.24	99								

SPENCER F. BAIRD; January 17, 1959; 0924 GCT; 26°03.5'N, 112°47.5'W; sounding, 45 fm; wind, 340°, force 2; weather, clear; sea, slight; wire angle, 03°. 133.25

1	20.66	34.34	4.76	382	0	(20.66)	(34.34)	(4.76)	(24.10)	(382)	(0.00)	
10	20.66	34.34	4.89	382	10	20.66	34.34	4.89	24.10	382	0.04	
29	20.25	34.34	4.75	372	20	20.37	34.35	4.78	24.18	374	0.08	
49	17.74	34.01	4.56	335	30	20.24	34.34	4.74	24.22	371	0.11	

SPENCER F. BAIRD; January 17, 1959; 1151 GCT; 25°53.5'N, 113°09'W; sounding, 115 fm; wind, 350°, force 2; weather, clear; sea, slight; wire angle, 05°. 133.30

2	20.28	34.42	4.82	366	0	(20.28)	(34.42)	(4.82)	(24.27)	(366)	(0.00)	
11	20.28	34.43	4.65	366	10	20.28	34.43	4.74	24.27	366	0.04	
30	20.09	34.42	3.94	362	20	20.29	34.44	4.58	24.28	365	0.07	
49	18.92	34.22	4.38	347	30	20.09	34.42	3.94	24.32	362	0.11	
73	15.37	33.86	3.65	293	50	18.79	34.20	4.38	24.48	346	0.18	
96	13.69	33.95	2.77	253	75	15.20	33.86	3.59	25.07	290	0.26	
121	13.00	34.18	1.63	223	100	13.40	33.95	2.66	25.52	248	0.33	
149	12.06	34.24	0.97	201	150	12.06	34.26	0.93	26.02	200	0.44	
168	12.06	34.58	0.40	176								

a) The use of these values results in an unusual property structure, but nevertheless the values were accepted in drawing the property curve.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

133.40 SPENCER F. BAIRD; January 17, 1959; 1805 GCT; 25°34.5'N, 113°45.5'W; sounding, 380 fm; wind, direction missing, force 1; weather, cloudy; sea, slight; wire angle, 04°.

2	21.02	34.38	3.99	388	0	(21.02)	(34.38)	(3.99)	(24.03)	(388)	(0.00)
11	20.98	34.38	4.28	388	10	20.99	34.38	4.20	24.04	388	0.04
30	20.90	34.34	4.47	388	20	20.94	34.36	4.36	24.04	388	0.08
54	20.28	34.34	3.81	372	30	20.90	34.34	4.47	24.04	388	0.12
64	20.22	34.39	4.01	367	50	20.38	34.32	3.93	24.17	376	0.19
73	18.50	34.00	4.30	354	75	18.00	33.93	4.19	24.47	347	0.28
82	17.03	33.83	3.80	332	100	15.39	33.87	3.38	25.04	293	0.36
96	15.66	33.88	3.46	298	150	11.68	33.89	2.27	25.80	220	0.49
111	14.42	33.84	3.10	276	200	10.57	34.30	1.32	26.32	170	0.59
130	12.64	33.84	2.84	242	250	9.82	34.39	0.98	26.52	152	0.67
148	11.75	33.87	2.30	222	300	9.32	34.45	0.76	26.66	139	0.75
172	10.99	34.13	1.78	190	400	8.27	34.47	0.32	26.84	122	0.89
196	10.62	34.29	1.37	172	500	7.21	34.49	0.27	27.01	106	1.01
243	9.92	34.38	1.00	154							
318	9.14	34.47	0.67	135							
412	8.14	34.47	0.29	120							
535	6.81	34.49	0.27	101							

133.50 SPENCER F. BAIRD; January 17, 1959; 2257 GCT; 25°16'N, 114°24'W; sounding, 1980 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 02°.

1	22.02	34.52	4.63	405	0	(22.02)	(34.52)	(4.63)	(23.86)	(405)	(0.00)
10	21.76	34.49	4.76	399	10	21.76	34.49	4.76	23.92	399	0.04
29	21.36	34.44	4.74	392	20	21.56	34.47	4.75	23.96	396	0.08
53	20.36	34.38	4.92	371	30	21.32	34.44	4.74	24.00	392	0.12
63	20.05	34.33	4.82	368	50	20.50	34.40	4.91	24.20	373	0.20
72	17.84	33.98	5.03	340	75	17.00	33.90	5.00	24.69	326	0.28
82	16.42	33.89	4.58	314	100	14.18	33.77	4.01	25.23	275	0.36
96	14.54	33.78	4.12	282	150	11.41	34.10	2.08	26.02	200	0.48
110	13.27	33.79	3.72	256	200	10.60	34.44	1.00	26.43	161	0.57
129	11.98	33.84	3.16	229	250	10.17	34.53	0.55	26.58	146	0.65
148	11.46	34.09	2.10	202	300	9.39	34.52	0.42	26.70	135	0.72
172	10.86	34.20	1.66	183	400	8.39	34.56	0.25	26.89	118	0.86
195	10.64	34.42	1.06	163	500	7.30	34.53	0.21	27.03	104	0.97
242	10.26	34.53	0.56	148							
317	9.16	34.52	0.38	132							
412	8.28	34.56	0.24	116							
536	6.86	34.51	0.20	100							

133.60 SPENCER F. BAIRD; January 18, 1959; 0357 GCT; 24°55'N, 115°02'W; sounding, 2110 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.

2	20.81	34.35	4.93	385	0	(20.81)	(34.35)	(4.93)	(24.07)	(385)	(0.00)
11	20.80	34.32	4.79	387	10	20.80	34.32	4.79	24.05	387	0.04
30	20.36	34.27	4.99	379	20	20.80	34.32	4.79	24.05	387	0.08
40	19.76	34.20	4.79	370	30	20.36	34.27	4.99	24.14	379	0.12
49	19.50	34.14	4.85	367	50	19.46	34.14	4.86	24.26	367	0.19
58	19.14	34.08	5.11	363	75	16.61	33.98	5.18	24.84	312	0.28
68	18.05	34.09	5.19	337	100	13.60	33.76	4.40	25.34	265	0.35
82	15.88	33.95	5.15	298	150	11.60	34.04	2.13	25.94	208	0.47
96	13.96	33.78	4.61	270	200	10.54	34.33	1.37	26.36	168	0.56
110	12.67	33.71	3.77	251	250	10.32	34.52	0.64	26.54	150	0.65
133	11.66	33.77	2.85	229	300	9.50	34.50	0.48	26.66	139	0.72
161	11.60	34.22	1.78	194	400	8.28	34.51	0.30	26.86	120	0.86
194	10.60	34.31	1.47	170	500	7.10					
241	10.42	34.51	0.70	152							
316	9.24	34.49	0.45	136							
411	8.16	34.51	0.29	117							
535	6.70	34.64u	0.19	-							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
SPENCER F. BAIRD; January 19, 1959; 1635 GCT; 25°33.5'N, 112°20.5'W; sounding, 45 fm; wind, calm; weather, fog; sea, slight; wire angle, 02°.											137.23
2	20.74	34.51	4.59	372	0	(20.74)	(34.51)	(4.59)	(24.21)	(372)	(0.00)
11	20.76	34.51	4.91	372	10	20.76	34.51	4.90	24.20	372	0.04
30	20.30	34.55	4.49	358	20	20.76	34.53	4.86	24.22	370	0.07
50	19.30	34.47	3.57	338	30	20.30	34.55	4.49	24.36	358	0.11
					50	19.30	34.47	3.57	24.56	338	0.18
SPENCER F. BAIRD; January 19, 1959; 1333 GCT; 25°20'N, 112°46'W; sounding, 172 fm; wind, 340°, force 1; weather, clear; sea, smooth; wire angle, 03°.											137.30
1	21.30	34.51	5.05	386	0	(21.30)	(34.51)	(5.05)	(24.06)	(386)	(0.00)
10	21.29	34.49	5.08	387	10	21.29	34.49	5.08	24.05	387	0.04
29	21.20	34.47	4.99	386	20	21.25	34.48	5.08	24.05	387	0.08
49	20.67	34.42	5.02	377	30	21.20	34.47	4.99	24.06	386	0.12
72	17.87	34.16	4.47	327	50	20.62	34.41	5.01	24.17	376	0.19
96	14.77	34.04	3.32	268	75	17.80	34.15	4.43	24.70	326	0.28
120	14.39	34.41	1.58	233	100	14.68	34.09	3.05	25.36	263	0.36
158	12.43	34.54	0.72	186	150	12.81	34.52	0.89	26.07	195	0.47
197	11.52	34.60	0.37	165	200	11.48	34.60	0.34	26.40	164	0.56
245	11.10	34.65	0.26	154	250	(11.07)	(34.66)	(0.25)	(26.52)	(152)	(0.64)
SPENCER F. BAIRD; January 19, 1959; 1053 GCT; 25°10'N, 113°05.5'W; sounding, 650 fm; wind, 010°, force 1; weather, clear; sea, smooth; wire angle, 02°.											137.35
1	21.02	34.42	5.01	386	0	(21.02)	(34.42)	(5.01)	(24.06)	(386)	(0.00)
10	21.00	34.45	5.12	382	10	21.00	34.45	5.12	24.10	382	0.04
29	20.76	34.40	5.13	380	20	20.83	34.42	5.12	24.12	381	0.08
58	19.06	33.91	5.19	374	30	20.75	34.40	5.13	24.13	380	0.11
68	17.26	33.84	5.13	336	50	20.49	34.00	5.15	24.15	378	0.19
77	16.33	33.86	5.11	314	75	17.10	33.84	5.13	24.63	332	0.28
91	15.15	33.84	4.57	290	100	14.46	33.84	3.85	25.28	270	0.36
106	13.27	33.84	3.59	253	150	11.80	34.29	1.47	26.09	192	0.47
120	12.40	33.95	2.81	229	200	10.93	34.48	0.87	26.40	164	0.56
139	12.00	34.23	1.64	200	250	10.43	34.57	0.48	26.57	148	0.64
186	11.14	34.44	1.01	170	300	9.82	34.53	0.40	26.63	142	0.72
210	10.79	34.51	0.72	159	400	8.51	34.48	0.30	26.81	125	0.85
263	10.33	34.58	0.44	146	500	7.35	34.49	0.21	26.99	108	0.98
344	9.22	34.47	0.36	136	600	(6.21)	(34.47)	(0.21)	(27.12)	(95)	(1.08)
448	7.96	34.49	0.24	116							
583	6.40	34.47	0.20	97							
SPENCER F. BAIRD; January 19, 1959; 0755 GCT; 25°00'N, 113°24.5'W; sounding, 1760 fm; wind, 010°, force 1; weather, partly cloudy; sea, smooth; wire angle, 20°.											137.40
2	20.61	34.47	5.09	371	0	(20.61)	(34.47)	(5.09)	(24.22)	(371)	(0.00)
10	20.59	34.38	5.11	377	10	20.59	34.38	5.11	24.15	377	0.04
28	20.22	34.40	5.16	367	20	20.34	34.39	5.15	24.22	371	0.07
51	20.06	34.45	5.14	359	30	20.19	34.41	5.16	24.28	365	0.11
61	19.94	34.42	4.95	358	50	20.06	34.45	5.15	24.34	359	0.18
68	19.22	34.29	4.81	350	75	17.28	33.93	4.94	24.65	330	0.27
77	16.84	33.89	4.96	324	100	14.50	33.85	4.04	25.22	276	0.35
90	15.66	33.93	4.44	294	150	11.48	34.02	2.28	25.95	206	0.47
103	13.88	33.79	3.86	268	200	11.25	34.50	0.80	26.36	167	0.56
118	12.98	33.78	3.54	252	250	10.65	34.57	0.56	26.52	152	0.65
134	12.05	33.91	2.75	225	300	9.93	34.57	0.42	26.64	140	0.72
152	11.46	34.05	2.20	204	400	8.47	34.50	0.30	26.83	123	0.86
172	11.50	34.40	1.17	179	500	(7.27)	(34.46)	(0.28)	(26.98)	(109)	(0.98)
212	11.11	34.52	0.71	164							
280	10.22	34.58	0.47	144							
367	8.92	34.52	0.31	128							
487	7.42	34.47	0.28	110							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

137.50 SPENCER F. BAIRD; January 19, 1959; 0245 GCT; 24°41'N, 114°02.5'W; sounding, 1985 fm; wind, 270°, force 2; weather, cloudy; sea, smooth; wire angle, 05°.

1	23.22	34.62	5.08	430	0	(23.22)	(34.62)	(5.08)	(23.60)	(430)	(0.00)
10	23.20	34.63	5.01	428	10	23.20	34.63	5.01	23.62	428	0.04
29	23.12	34.67	3.88	423	20	23.14	34.65	4.60	23.64	426	0.08
53	22.48	34.55	4.23	415	30	23.11	34.67	3.88	23.67	423	0.13
62	20.66	34.31	4.22	384	50	23.10	34.67	3.90	23.68	422	0.21
72	18.64	34.19	4.20	344	75	18.04	34.15	4.18	24.63	332	0.31
81	17.84	34.14	4.12	328	100	17.25	34.36	2.00	24.98	298	0.39
96	17.06	34.28	2.88	300	150	12.43	34.23	1.64	25.92	209	0.52
109	16.18	34.23	1.71	284	200	11.72	34.63	0.47	26.38	166	0.61
128	13.82	34.21	1.98	236	250	11.28	34.69	0.18	26.50	154	0.69
147	12.56	34.23	1.67	210	300	10.01	34.57	0.34	26.63	142	0.77
170	11.90	34.21	1.17	200	400	8.73	34.54	0.18	26.82	124	0.91
193	11.77	34.60	0.53	169	500	7.32	34.46	0.20	26.96	110	1.03
240	11.46	34.70	0.17	156							
315	9.76	34.56	0.38	138							
410	8.61	34.54	0.17	122							
534	6.77	34.40	0.21	106							

137.60 SPENCER F. BAIRD; January 18, 1959; 2205 GCT; 24°21'N, 114°39'W; sounding, 2095 fm; wind, 300°, force 2; weather, cloudy; sea, slight; wire angle, 03°.

1	22.54	34.56	4.94	416	0	(22.54)	(34.56)	(4.94)	(23.75)	(416)	(0.00)
10	22.44	34.53	4.90	415	10	22.44	34.53	4.90	23.76	415	0.04
29	21.01	34.38	5.13	388	20	21.80	34.45	5.01	23.87	404	0.08
53	20.62	34.34	5.10	381	30	20.98	34.38	5.13	24.04	388	0.12
63	19.64	34.13	5.16	372	50	20.69	34.35	5.11	24.10	382	0.20
72	16.76	33.82	5.38	326	75	16.45	33.80	5.34	24.75	321	0.29
82	15.90	33.80	5.16	309	100	13.94	33.83	4.05	25.32	267	0.36
96	14.31	33.83	4.26	274	150	11.22	34.07	2.16	26.03	199	0.48
110	13.02	33.84	3.45	248	200	10.76	34.40	0.99	26.38	166	0.57
130	11.79	33.88	3.02	222	250	10.43	34.58	0.46	26.57	148	0.65
149	11.26	34.07	2.18	199	300	9.70	34.56	0.38	26.68	137	0.73
173	10.82	34.21	1.75	182	400	8.48	34.55	0.25	26.87	119	0.86
196	10.78	34.38	1.06	168	500	7.39	34.51	0.18	27.00	107	0.98
243	10.52	34.58	0.47	149							
319	9.46	34.56	0.35	134							
414	8.32	34.55	0.21	117							
538	7.00	34.49	0.18	103							

137.70 SPENCER F. BAIRD; January 18, 1959; 1719 GCT; 24°00'N, 115°17.5'W; sounding, 2060 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 12°.

2	20.18	34.22	5.21	379	0	(20.18)	(34.22)	(5.21)	(24.14)	(379)	(0.00)
10	20.16	34.22	5.21	378	10	20.16	34.22	5.21	24.15	378	0.04
30	19.82	34.11	5.23	378	20	20.15	34.22	5.22	24.15	378	0.08
53	19.44	34.05	5.26	372	30	19.82	34.11	5.23	24.15	378	0.11
62	19.27	34.04	5.22	369	50	19.50	34.06	5.26	24.20	373	0.19
71	17.82	33.91	5.57	344	75	17.28	33.84	5.56	24.59	336	0.28
81	16.53	33.78	5.54	324	100	14.70	33.76	4.88	25.10	287	0.36
95	15.22	33.76	5.13	298	150	11.45	34.00	2.51	25.93	208	0.48
109	13.76	33.76	4.31	268	200	10.86	34.32	1.29	26.29	174	0.58
127	13.06	33.93	3.17	242	250	10.23	34.47	0.81	26.52	152	0.66
145	11.76	33.99	2.59	213	300	9.03	34.35	0.98	26.62	143	0.74
168	10.98	34.07	2.26	194	400	7.88	34.41	0.52	26.85	121	0.88
189	10.94	34.25	1.56	180	500	6.88	34.46	0.30	27.04	103	0.99
236	10.46	34.48	0.78	156							
308	8.86	34.33	1.00	141							
398	7.91	34.41	0.52	121							
516	6.72	34.47	0.27	101							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; January 18, 1959; 1242 GCT; 23°39'N, 115°57'W; sounding, 2070 fm; wind, 240°, force 1; weather, clear; sea, moderate; wire angle, 02°. 137.80

1	20.88	34.34	5.01	388	0	(20.88)	(34.34)	(5.01)	(24.04)	(388)	(0.00)
10	20.88	34.33	4.84	388	10	20.88	34.33	4.84	24.04	388	0.04
29	20.85	34.34	4.98	387	20	20.87	34.33	4.87	24.04	388	0.08
54	20.38	34.20	4.72	385	30	20.84	34.34	4.98	24.06	387	0.12
63	18.14	33.91	4.87	352	50	20.50	34.24	4.77	24.07	385	0.19
72	16.98	33.82	4.88	331	75	16.70	33.82	4.88	24.70	325	0.28
82	16.10	33.82	4.88	312	100	13.23	33.73	3.99	25.38	260	0.36
96	13.94	33.75	4.14	272	150	11.52	34.20	1.69	26.08	194	0.47
110	12.20	33.78	3.63	237	200	10.76	34.48	0.71	26.44	160	0.56
129	12.58	34.20	1.68	213	250	9.74	34.49	0.51	26.62	143	0.64
147	11.62	34.20	1.70	196	300	9.26	34.44	0.46	26.66	139	0.71
171	10.92	34.22	1.53	182	400	8.40	34.40	0.46	26.76	129	0.85
195	10.83	34.47	0.75	163	500	7.56	34.47	0.31	26.95	112	0.98
241	9.86	34.50	0.53	144							
318	9.07	34.42	0.45	138							
412	8.30	34.40	0.46	128							
534	7.28	34.51	0.23	106							

SPENCER F. BAIRD; January 19, 1959; 2151 GCT; 24°45'N, 112°24'W; sounding, 63 fm; wind, 270°, force 1; weather, cloudy; sea, moderate; wire angle, 00°. 140.30

1	21.48	34.50	4.93	392	0	(21.48)	(34.50)	(4.93)	(24.00)	(392)	(0.00)
10	21.29	34.51	4.99	386	10	21.29	34.51	4.99	24.06	386	0.04
29	21.22	34.51	4.87	384	20	21.25	34.51	4.91	24.07	385	0.08
49	19.61	34.33	4.60	342	30	21.19	34.51	4.86	24.08	384	0.12
72	16.59	34.15	3.57	299	50	19.48	34.52	4.52	24.56	339	0.19

SPENCER F. BAIRD; January 20, 1959; 0038 GCT; 24°35'N, 112°42.5'W; sounding, 550 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 12°. 140.35

1	22.32	34.54	4.64	411	0	(22.32)	(34.54)	(4.64)	(23.80)	(411)	(0.00)
10	22.28	34.52	4.67	412	10	22.28	34.52	4.67	23.79	412	0.04
29	21.98	34.54	4.98	402	20	22.11	34.53	4.88	23.84	407	0.08
39	21.89	34.54	4.99	399	30	21.95	34.54	4.98	23.90	402	0.12
48	20.78	34.40	4.87	381	50	20.70	34.39	4.88	24.13	380	0.20
57	20.46	34.34	4.96	377	75	18.65	34.25	4.34	24.55	339	0.29
66	19.66	34.27	4.95	362	100	17.20	34.54	2.37	25.14	284	0.37
80	18.10	34.25	3.85	326	150	12.40	34.34	1.28	26.02	200	0.49
93	17.52	34.39	2.73	302	200	11.56	34.59	0.52	26.38	166	0.58
106	16.76	34.60	2.16	270	250	10.67	34.60	0.39	26.54	150	0.67
127	14.15	34.34	1.42	233	300	9.97	34.57	0.33	26.64	140	0.74
152	12.30	33.34	1.26	198	400	8.46	34.50	0.23	26.83	123	0.88
181	11.94	34.56	0.64	175	500	7.34	34.46	0.16	26.96	110	1.00
225	11.02	34.60	0.41	156							
297	10.02	34.58	0.34	142							
389	8.60	34.50	0.25	125							
512	7.22	34.46	0.14	109							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
140.40	SPENCER F. BAIRD; January 20, 1959; 0307 GCT; 24°24.5'N, 113°01'W; sounding, 1830 fm; wind, 260°, force 1; weather, overcast; sea, moderate; wire angle, 13°.										
2	23.36	34.57	4.47	437	0	(23.36)	(34.57)	(4.77)	(23.53)	(437)	(0.00)
11	23.34	34.51	4.76	441	10	23.35	34.52	4.76	23.49	440	0.04
30	23.30	34.51	4.77	440	20	23.32	34.51	4.77	23.49	440	0.09
53	23.30	34.54	4.82	438	30	23.30	34.51	4.77	23.49	440	0.13
62	23.14	34.52	4.88	435	50	23.30	34.54	4.81	23.52	438	0.22
71	22.92	34.54	4.58	427	75	22.50	34.49	4.58	23.72	419	0.33
81	21.18	34.35	4.59	394	100	17.60	34.22	3.98	24.80	316	0.42
94	18.62	34.36	4.28	330	150	12.91	34.22	1.97	25.83	218	0.56
108	16.69	34.12	3.65	303	200	11.69	34.52	0.74	26.30	174	0.66
126	14.77	34.09	2.51	264	250	11.20	34.65	0.33	26.49	155	0.74
142	13.43	34.20	2.26	230	300	10.42	34.64	0.27	26.62	143	0.82
165	12.26	34.25	1.58	204	400	9.00	34.54	0.22	26.78	128	0.96
187	11.80	34.44	0.98	182	500	7.63	34.51	0.19	26.96	111	1.09
231	11.47	34.64	0.39	161							
304	10.35	34.63	0.27	142							
398	9.02	34.54	0.22	129							
520	7.38	34.50	0.18	107							
140.50	SPENCER F. BAIRD; January 20, 1959; 0806 GCT; 24°04'N, 113°38.5'W; sounding, 1925 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 16°.										
1	23.46	34.66	4.88	434	0	(23.46)	(34.66)	(4.88)	(23.56)	(434)	(0.00)
10	23.48	34.63	4.05	437	10	23.48	34.63	4.05	23.53	437	0.04
29	23.46	34.65	3.92	435	20	23.48	34.63	4.00	23.54	436	0.09
57	22.34	34.62	4.34	406	30	23.43	34.65	3.93	23.56	434	0.13
65	19.66	34.27	3.66	362	50	23.00	34.64	4.13	23.68	423	0.22
74	18.40	34.23	3.53	334	75	18.00	34.20	3.52	24.68	327	0.31
88	16.19	34.07	3.31	296	100	15.00	34.08	2.82	25.28	270	0.39
101	14.85	34.09	2.76	266	150	12.33	34.34	1.14	26.04	198	0.50
114	14.10	34.21	1.97	242	200	11.32	34.56	0.41	26.40	164	0.60
132	12.82	34.19	1.81	219	250	11.00	34.65	0.32	26.52	152	0.68
149	12.38	34.33	1.14	200	300	10.27	34.63	0.26	26.64	141	0.75
175	11.72	34.52	0.80	174	400	8.76	34.54	0.21	26.82	124	0.89
196	11.34	34.55	0.43	165	500	7.41	34.48	0.18	26.98	109	1.01
245	11.05	34.65	0.33	153							
321	9.93	34.61	0.25	137							
422	8.44	34.52	0.20	121							
554	6.71	34.46	0.16	102							
140.60	SPENCER F. BAIRD; January 20, 1959; 1309, 1340 GCT; 23°43'N, 114°15.5'W; sounding, 2430 fm; wind, 270°, force 3; weather, clear; sea, rough; wire angle, 05°, 05°.										
2	23.44	34.33	4.75	457	0	(23.44)	(34.33)	(4.75)	(23.32)	(457)	(0.00)
11	23.44	34.33	4.81	457	10	23.44	34.33	4.80	23.32	457	0.04
30	23.44	34.67	4.67	433	20	23.44	34.46	4.76	23.41	448	0.09
45	22.80	34.56	4.71	423	30	23.44	34.67	4.67	23.57	433	0.14
55	21.98	34.51	4.72	404	50	22.40	34.53	4.71	23.77	414	0.22
64	21.08	34.37	4.73	391	75	19.75	34.20	4.79	24.24	369	0.32
73	20.05	34.22	4.87	376	100	17.97	34.27	3.52	24.74	322	0.41
92	18.03	34.27	3.57	323	150	14.60	34.62	0.69	25.79	222	0.54
106	16.79	34.25	2.94	296	200	13.02	34.74	0.32	26.20	182	0.64
121	15.26	34.20	2.54	267	250	12.03	34.80	0.16	26.44	160	0.73
144	15.12	34.67	0.61	229	300	11.07	34.74	0.10	26.58	147	0.81
172	13.47	34.60	0.77	201	400	8.98	34.62	0.12	26.85	121	0.95
					500	7.35	34.59	0.15	27.06	101	1.07
211	12.86	34.78	0.21	176	600	(6.07)	(34.52)		(27.19)	(89)	(1.17)
263	11.76	34.78	0.14	155							
344	10.28	34.68	0.08	138							
444	8.10	34.60	0.15	110							
581	6.30	34.54	0.14	90							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
SPENCER F. BAIRD; January 21, 1959; 1226 GCT; 24°19'N, 111°48'W; sounding, 43 fm; wind, 040°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.											143.26
2	22.03	34.71	4.94	392	0	(22.03)	(34.71)	(4.94)	(24.00)	(392)	(0.00)
11	22.05	34.69	4.73	393	10	22.05	34.69	4.73	23.99	393	0.04
30	21.66	34.65	4.71	386	20	21.92	34.67	4.72	24.01	391	0.08
50	20.74	34.57	4.27	368	30	21.66	34.65	4.71	24.06	386	0.12
					50	20.74	34.57	4.27	24.25	368	0.19
SPENCER F. BAIRD; January 21, 1959; 0957 GCT; 24°09.5'N, 112°03.5'W; sounding, 130 fm; wind, 240°, force 2; weather, cloudy; sea, slight; wire angle, 20°.											143.30
1	22.64	34.55	4.82	419	0	(22.64)	(34.55)	(4.82)	(23.72)	(419)	(0.00)
10	22.66	34.56	4.89	420	10	22.66	34.56	4.89	23.70	420	0.04
29	22.19	34.63	5.06	401	20	22.66	34.56	4.95	23.72	418	0.08
48	21.86	34.65	5.04	391	30	22.20	34.63	5.06	23.91	401	0.12
69	20.66	34.59	4.28	365	50	21.82	34.65	5.02	24.02	390	0.20
91	16.36	34.48	2.20	270	75	18.50	34.48	3.72	24.77	319	0.29
115	14.54	34.62	0.93	221	100	15.61	34.56	1.58	25.52	248	0.36
149	13.01	34.66	0.47	188	150	12.99	34.66	0.45	26.16	187	0.47
191	11.90	34.66	0.30	167	200	(11.72)	(34.66)	(0.28)	(26.41)	(163)	(0.56)
SPENCER F. BAIRD; January 21, 1959; 0650 GCT; 24°00'N, 112°22'W; sounding, 1350 fm; wind, 260°, force 2; weather, overcast; sea, slight; wire angle, 11°.											143.35
2	22.54	34.56	4.66	416	0	(22.54)	(34.56)	(4.66)	(23.75)	(416)	(0.00)
11	22.53	34.56	4.81	416	10	22.53	34.56	4.81	23.75	416	0.04
30	22.24	34.55	4.87	408	20	22.54	34.56	4.81	23.75	416	0.08
43	21.27	34.47	4.97	388	30	22.24	34.55	4.87	23.83	408	0.12
53	20.66	34.35	5.02	382	50	20.91	34.40	5.00	24.08	384	0.20
62	19.41	34.27	4.49	356	75	17.25	34.14	4.19	24.78	318	0.29
71	18.06	34.16	4.41	332	100	15.75	34.43	2.20	25.38	260	0.37
90	16.54	34.28	2.82	288	150	12.40	34.53	0.95	26.17	186	0.48
104	15.86	34.57	1.53	252	200	11.40	34.61	0.54	26.42	162	0.56
117	14.26	34.53	1.30	222	250	10.55	34.54	0.43	26.52	152	0.64
140	12.76	34.55	0.99	191	300	9.69	34.53	0.39	26.66	139	0.72
168	11.96	34.52	0.90	178	400	8.41	34.52	0.29	26.86	120	0.86
204	11.36	34.62	0.51	160	500	7.39	34.52	0.20	27.00	106	0.98
256	10.44	34.54	0.42	151							
334	9.18	34.53	0.38	132							
433	8.05	34.52	0.24	116							
569	6.78	34.52	0.17	98							
SPENCER F. BAIRD; January 21, 1950; 0353 GCT; 23°49.5'N, 112°42.5'W; sounding, 1740 fm; wind, 290°, force 2; weather, overcast; sea, slight; wire angle, 11°.											143.40
2	23.26	- a)	4.72		0	(23.26)	(34.57)	(4.72)	(23.56)	(434)	(0.00)
11	23.29	34.61	4.79	433	10	23.29	34.60	4.79	23.57	433	0.04
30	23.29	34.54	4.76	438	20	23.29	34.57	4.76	23.55	435	0.09
53	23.15	34.60	4.81	430	30	23.29	34.54	4.76	23.52	438	0.13
63	23.08	34.63	4.76	425	50	23.19	34.59	4.80	23.59	431	0.22
72	22.89	34.61	4.81	422	75	22.00	34.41	4.95	23.79	412	0.32
81	21.68	34.35	4.99	408	100	18.40	34.29	4.33	24.65	330	0.42
96	19.90	34.36	4.71	361	150	12.88	34.29	1.83	25.88	213	0.55
109	16.32	34.20	3.74	289	200	11.60	34.50	0.64	26.30	173	0.65
127	14.25	34.16	2.93	249	250	11.09	34.60	0.40	26.47	157	0.74
145	13.00	34.24	2.04	218	300	10.40	34.59	0.30	26.59	146	0.81
168	12.47	34.42	1.05	195	400	9.08	34.56	0.18	26.78	128	0.96
190	11.77	34.47	0.71	178	500	7.70	34.53	0.18	26.97	110	1.08
236	11.27	34.59	0.45	161							
310	10.26	34.59	0.29	144							
404	9.03	34.56	0.18	127							
526	7.33	34.52	0.18	105							

a) One salinity sample missing; it was assumed to be the two-meter sample.

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5901

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
143.50	SPENCER F. BAIRD; January 20, 1959; 2234 GCT; 23°31'N, 113°23'W; sounding, 1830 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.										
2	23.93	34.23	4.72	478	0	(23.93)	(34.23)	(4.72)	(23.10)	(478)	(0.00)
11	23.89	34.25	4.84	475	10	23.89	34.25	4.84	23.13	475	0.05
30	23.80	34.23	4.82	474	20	23.84	34.24	4.83	23.13	474	0.10
58	22.60	34.52	4.81	420	30	23.80	34.23	4.82	23.14	474	0.14
69	20.10	34.16	5.07	381	50	23.60	34.29	4.80	23.24	464	0.24
77	18.48	34.09	4.54	347	75	18.88	34.05	4.73	24.34	360	0.34
92	16.51	34.14	3.60	298	100	15.95	34.13	3.11	25.11	286	0.42
107	15.44	34.13	2.82	276	150	12.53		1.65			
121	14.42	34.18	2.41	251	200	11.99		0.30			
140	13.08	34.30	2.02	216	250	11.48		0.14			
158	12.26	-	1.36		300	10.53		0.24			
187	11.96	-	0.63		400	8.77		0.26			
210	12.02	-	0.17		500	7.47		0.16			
263	11.28	-	0.15		600	(6.47)					
346	9.59	-	0.38								
451	8.06	-	0.17								
581	6.63	-	0.14								
143.60	SPENCER F. BAIRD; January 20, 1959; 1739 GCT; 23°11'N, 113°56'W; sounding, 2120 fm; wind, 260°, force 3; weather, cloudy; sea, rough; wire angle, 22°.										
2	23.56	34.27	4.87	464	0	(23.56)	(34.27)	(4.87)	(23.24)	(464)	(0.00)
10	23.58	34.28	4.74	464	10	23.58	34.28	4.74	23.24	464	0.05
28	23.60	34.27	4.76	465	20	23.60	34.27	4.75	23.23	465	0.09
54	21.46	34.38	4.82	400	30	23.60	34.27	4.77	23.23	465	0.14
63	19.39	34.20	4.54	360	50	22.40	34.34	4.82	23.63	427	0.23
72	17.60	34.16	3.95	321	75	17.20	34.16	3.67	24.84	312	0.32
86	17.25	34.49	2.04	289	100	16.30	34.50	1.41	25.32	267	0.40
98	16.40	34.49	1.50	270	150	13.89	34.61	0.58	25.93	208	0.52
112	15.66	34.61	0.88	245	200	12.23	34.67	0.36	26.31	172	0.61
129	15.26	34.67	0.52	232	250	10.89	34.64	0.31	26.53	151	0.70
146	14.14	34.60	0.62	214	300	10.17	34.62	0.26	26.65	140	0.77
171	13.02	34.73	0.31	183	400	8.67	34.52	0.23	26.82	124	0.91
192	12.46	34.69	0.35	175	500	7.22	34.46	0.35	26.98	109	1.03
239	11.08	34.64	0.32	155							
314	9.95	34.61	0.24	137							
415	8.46	34.51	0.23	122							
542	6.62	34.43	0.42	103							
147.20	SPENCER F. BAIRD; January 22, 1959; 0126 GCT; 23°56'N, 111°04'W; sounding, 68 fm; wind, 260°, force 2; weather, clear; sea, slight; wire angle, 02°.										
1	22.65	34.64	4.70	413	0	(22.65)	(34.64)	(4.70)	(23.78)	(413)	(0.00)
10	22.54	34.67	4.83	408	10	22.54	34.67	4.83	23.83	408	0.04
29	22.48	34.67	4.24	406	20	22.54	34.68	4.75	23.84	407	0.08
49	21.78	34.61	4.61	392	30	22.48	34.67	4.24	23.85	406	0.12
72	17.50	34.27	3.24	310	50	21.78	34.61	4.61	24.00	392	0.20
96	15.54	34.60	1.22	243	75	17.10	34.29	3.05	24.97	300	0.29
					100	(15.20)	(34.60)	(1.17)	(25.64)	(236)	(0.36)
147.25	SPENCER F. BAIRD; January 22, 1959; 0356 GCT; 23°46.5'N, 111°22.5'W; sounding, 200 fm; wind, 250°, force 2; weather, partly cloudy; sea, slight; wire angle, 06°.										
2	22.42	34.65	4.53	406	0	(22.42)	(34.65)	(4.53)	(23.86)	(406)	(0.00)
11	22.20	34.62	4.65	402	10	22.22	34.62	4.65	23.89	402	0.04
30	21.55	34.54	4.66	391	20	21.92	34.58	4.65	23.94	398	0.08
50	20.56	34.49	4.39	369	30	21.55	34.54	4.66	24.01	391	0.12
73	17.20	34.36	2.82	297	50	20.56	34.49	4.39	24.24	369	0.20
96	15.56	34.40	1.82	258	75	16.95	34.37	2.64	25.07	290	0.28
120	14.26	34.63	0.70	215	100	15.32	34.44	1.61	25.49	250	0.35
158	12.92	34.64	0.47	188	150	13.20	34.64	0.52	26.09	193	0.46
196	12.08	34.72	0.30	166	200	12.00	34.72	0.30	26.39	165	0.55
244	11.29	34.69	0.22	154	250	11.20	34.69	0.23	26.51	153	0.63
292	10.56	34.65	0.19	144	300	(10.43)	(34.65)	(0.19)	(26.63)	(142)	(0.71)

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
SPENCER F. BAIRD; January 22, 1959; 0720 GCT; 23°35'N, 111°44'W; sounding, 330°, force 1; weather, partly cloudy; sea, slight; wire angle, 02°.											147.30
3	23.36	34.73	4.71	426	0	(23.36)	(34.73)	(4.71)	(23.64)	(426)	(0.00)
12	23.36	34.69	4.66	428	10	23.36	34.70	4.67	23.62	428	0.04
31	23.30	34.70	4.63	426	20	23.34	34.69	4.65	23.62	428	0.08
41	23.16	34.72	4.58	421	30	23.31	34.70	4.64	23.64	426	0.13
51	22.67	34.65	4.83	413	50	22.75	34.66	4.82	23.77	414	0.21
60	21.73	34.51	4.66	398	75	18.50	34.30	3.78	24.63	332	0.30
69	19.63	34.34	4.19	356	100	15.79	34.30	2.41	25.28	270	0.38
84	17.06	34.27	3.29	301	150	13.08	34.65	0.57	26.13	189	0.50
98	15.90	34.31	2.42	272	200	11.86	34.68	0.34	26.39	165	0.59
112	14.38	34.20	2.31	248	250	10.77	34.64	0.37	26.56	149	0.67
136	13.44	34.60	0.81	200	300	10.04	34.64	0.27	26.68	137	0.74
164	12.73	34.70	0.37	180	400	8.75	34.59	0.14	26.87	120	0.88
197	11.92	34.68	0.34	166	500	(8.00)	(34.55)	(0.14)	(26.95)	(112)	(1.00)
244	10.88	34.64	0.38	151							
292	10.14	34.69	0.29	138							
391	8.82	34.60	0.14	121							
486	8.09	34.56	0.14	113							
SPENCER F. BAIRD; January 22, 1959; 1227 GCT; 23°16'N, 122°22.5'W; sounding, 1800 fm; wind, 020°, force 1; weather, partly cloudy; sea, rough; wire angle, 06°.											147.40
1	22.56	34.60	4.76	414	0	(22.56)	(34.60)	(4.76)	(23.78)	(414)	(0.00)
10	22.56	34.59	4.88	414	10	22.56	34.59	4.88	23.77	414	0.04
29	21.98	34.52	4.92	404	20	22.29	34.55	4.90	23.82	409	0.08
44	20.36	34.34	4.88	374	30	21.89	34.51	4.92	23.90	402	0.12
53	19.76	34.29	4.68	363	50	19.97	34.30	4.75	24.26	367	0.20
62	18.72	34.18	4.54	346	75	17.84	34.18	4.21	24.70	325	0.29
72	17.86	34.18	4.27	326	100	15.55	34.08	3.10	25.16	282	0.36
90	16.39	34.18	3.38	292	150	13.00	34.42	1.03	25.97	205	0.48
105	15.08	34.13	2.92	275	200	11.82	34.63	0.35	26.36	168	0.58
118	13.90	34.20	2.16	239	250	10.98	34.67	0.36	26.54	150	0.66
141	13.20	34.34	1.29	215	300	10.14	34.63	0.26	26.66	139	0.74
170	12.54	34.58	0.54	185	400	8.80	34.56	0.15	26.82	124	0.87
208	11.61	34.64	0.32	164	500	7.74	34.51	0.16	26.95	111	1.00
259	10.84	34.67	0.36	148							
340	9.45	34.60	0.15	130							
440	8.38	34.53	0.14	119							
578	6.94	34.52	0.19	100							
SPENCER F. BAIRD; January 22, 1959; 1659 GCT; 22°57'N, 112°54.5'W; sounding, 1935 fm; wind, 040°, force 2; weather, partly cloudy; sea, rough; wire angle, 07°.											147.50
2	23.72	34.25	4.65	470	0	(23.72)	(34.25)	(4.65)	(23.18)	(470)	(0.00)
11	23.70	34.25	4.76	470	10	23.70	34.25	4.75	23.18	470	0.05
30	23.70	34.34	4.61	464	20	23.70	34.29	4.70	23.21	467	0.09
54	22.88	34.52	4.65	443	30	23.70	34.34	4.61	23.25	464	0.14
63	22.16	34.51	4.48	423	50	23.62	34.39	4.62	23.31	458	0.23
73	20.63	34.33	4.27	382	75	20.30	34.31	4.21	24.18	375	0.34
82	18.91	34.20	3.88	349	100	16.00	34.17	3.15	25.13	284	0.42
96	16.88	34.13	3.78	307	150	13.84	34.69	0.40	26.00	202	0.54
111	15.82	34.43	1.61	262	200	12.30	34.76	0.19	26.36	168	0.64
130	14.89	34.59	0.78	230	250	11.18	34.66	0.22	26.50	154	0.72
149	13.89	34.69	0.39	203	300	10.43	34.64	0.16	26.62	143	0.80
172	12.86	34.72	0.44	180	400	9.02	34.53	0.13	26.77	129	0.94
196	12.38	34.76	0.19	169	500	7.73	34.51	0.13	26.96	111	1.06
243	11.30	34.67	0.24	156							
318	10.14	34.63	0.12	139							
412	8.84	34.52	0.14	127							
535	7.27	34.51	0.12	105							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
147.60	SPENCER F. BAIRD; January 22, 1959; 2158 GCT; 22°36'N, 113°30.5'W; sounding, 2020 fm; wind, 100°, force 1; weather, partly cloudy; sea, rough; wire angle, 04°.										
1	24.22	34.45	4.74	470	0	(24.22)	(34.45)	(4.74)	(23.18)	(470)	(0.00)
10	24.00	34.60	4.63	453	10	24.00	34.60	4.63	23.36	453	0.05
29	23.93	34.70	4.63	444	20	23.96	34.65	4.62	23.41	448	0.09
54	23.54	34.62	4.78	438	30	23.92	34.70	4.64	23.45	444	0.14
63	22.36	34.60	4.71	408	50	23.62	34.64	4.75	23.50	440	0.22
72	21.30	34.63	4.27	378	75	21.29	34.63	4.26	24.16	377	0.32
82	19.47	34.39	3.85	349	100	16.87	34.21	3.01	24.96	301	0.41
96	17.03	34.22	3.05	304	150	12.12	34.30	1.52	26.05	198	0.53
110	15.12	34.14	2.72	268	200	11.28	34.55	0.61	26.40	164	0.63
129	12.89	34.11	2.10	226	250	10.56	34.58	0.40	26.55	150	0.71
147	12.24	34.27	1.63	202	300	9.93	34.55	0.33	26.63	142	0.78
170	11.53	34.39	1.08	180	400	8.82	34.53	0.28	26.80	126	0.92
194	11.34	34.54	0.63	166	500	7.60	34.52	0.22	26.97	109	1.05
241	10.67	34.58	0.42	152							
316	9.72	34.54	0.30	139							
411	8.70	34.53	0.27	124							
534	7.19	34.51	0.20	104							
150.19	SPENCER F. BAIRD; January 23, 1959; 2345 GCT; 23°22.5'N, 110°41'W; sounding, 130 fm; wind, 300°, force 2; weather, clear; sea, slight; wire angle, 06°.										
2	22.48	34.70	4.70	404	0	(22.48)	(34.70)	(4.70)	(23.87)	(404)	(0.00)
11	22.41	34.72	4.83	400	10	22.42	34.72	4.82	23.90	401	0.04
30	22.23	34.73	4.84	395	20	22.33	34.73	4.85	23.95	397	0.08
49	22.18	34.73	4.76	395	30	22.23	34.73	4.84	23.97	395	0.12
72	19.50	34.33	4.21	354	50	22.18	34.73	4.76	23.99	393	0.20
95	15.75	34.55	1.41	252	75	19.18	34.35	3.98	24.50	344	0.29
118	13.89	34.64	0.67	206	100	15.14	34.58	1.10	25.64	236	0.37
150	12.75	34.70	0.41	180	150	12.75	34.70	0.41	26.23	180	0.47
150.25	SPENCER F. BAIRD; January 23, 1959; 2055 GCT; 23°12'N, 111°01'W; sounding, 760 fm; wind, direction missing, force 1; weather, partly cloudy; sea, slight; wire angle, 15°.										
1	22.75	34.78	4.75	405	0	(22.75)	(34.78)	(4.75)	(23.86)	(405)	(0.00)
10	22.49	34.70	4.79	404	10	22.49	34.70	4.79	23.87	404	0.04
28	22.46	34.69	4.76	404	20	22.48	34.69	4.78	23.88	404	0.08
38	22.44	34.71	4.68	402	30	22.46	34.69	4.74	23.88	404	0.12
47	21.76	34.66	4.47	387	50	21.56	34.65	4.34	24.08	384	0.20
56	21.35	34.63	4.14	379	75	19.05	34.45	3.24	24.61	334	0.29
65	20.66	34.60	3.73	364	100	15.64	34.52	1.40	25.48	251	0.36
79	18.30	34.40	2.97	320	150	12.88	34.59	0.57	26.12	190	0.47
92	16.28	34.33	1.78	279	200	12.05	34.64	0.24	26.32	171	0.56
106	15.56	34.54	1.34	248	250	11.49	34.67	0.18	26.45	159	0.65
129	13.44	34.61	0.63	200	300	10.78	34.64	0.17	26.56	149	0.73
157	12.72	34.59	0.54	187	400	9.23	34.58	0.10	26.77	129	0.87
189	12.17	34.62	0.26	175	500	7.69	34.52	0.10	26.97	110	1.00
235	11.68	34.68	0.19	162							
308	10.64	34.63	0.17	148							
401	9.22	34.58	0.10	129							
522	7.38	34.51	0.10	107							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

150.30

SPENCER F. BAIRD; January 23, 1959; 1802 GCT; 23°01'N, 111°20.5'W; sounding, 1510 fm; wind, 020°, force 2; weather, cloudy; sea, slight; wire angle, 28°.

2	22.82	34.70	4.68	414	0	(22.82)	(34.70)	(4.68)	(23.77)	(414)	(0.00)
10	22.80	34.65	4.27	416	10	22.80	34.65	4.27	23.75	416	0.04
27	22.68	34.63	4.71	414	20	22.73	34.64	4.52	23.76	415	0.08
36	22.52	34.64	4.44	410	30	22.64	34.63	4.67	23.78	413	0.12
44	22.18	34.59	4.75	404	50	22.06	34.53	4.16	23.86	405	0.21
52	22.04	34.53	4.15	405	75	20.49	34.38	4.17	24.18	374	0.30
61	21.46	34.49	4.45	392	100	18.04	34.32	3.20	24.76	320	0.39
73	20.73	34.41	4.23	378	150	13.12	34.43	0.97	25.94	207	0.52
85	18.87	34.27	3.71	343	200	11.59	34.57	0.44	26.36	168	0.62
98	18.14	34.32	3.25	322	250	11.24	34.69	0.20	26.51	154	0.70
117	15.76	34.33	1.94	268	300	10.62	34.64	0.17	26.58	146	0.78
139	14.21	34.43	1.08	228	400	9.17	34.54	0.20	26.75	130	0.92
161	12.44	34.43	0.89	194							
196	11.64	34.56	0.48	170							
256	11.20	34.69	0.19	153							
334	10.12	34.60	0.17	141							
445	8.50	34.51	0.26	122							

150.40

SPENCER F. BAIRD; January 23, 1959; 1253 GCT; 22°92.5'N, 111°59'W; sounding, 1830 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 07°.

1	23.86	34.55	4.16	453	0	(23.86)	(34.55)	(4.16)	(23.36)	(453)	(0.00)
10	23.85	34.58	4.21	450	10	23.85	34.58	4.21	23.39	450	0.04
29	23.30	34.67	3.15	428	20	23.65	34.63	3.73	23.48	441	0.09
38	22.98	34.65	3.92	421	30	23.26	34.67	3.20	23.63	428	0.13
48	22.79	34.65	3.60	416	50	22.73	34.64	3.53	23.77	414	0.22
57	21.84	34.53	3.38	400	75	18.49	34.36	3.05	24.69	326	0.31
67	20.24	34.33	3.27	372	100	16.30	34.41	1.68	25.25	273	0.39
80	17.68	34.37	2.85	307	150	12.52	34.49	0.57	26.11	191	0.50
94	16.42	34.38	1.95	278	200	11.91	34.66	0.20	26.36	168	0.60
112	16.14	34.48	1.21	264	250	11.04	34.64	0.12	26.51	154	0.68
131	13.39	34.45	0.86	210	300	10.32	34.61	0.14	26.62	143	0.76
160	12.34	34.54	0.44	184	400	8.99	34.55	0.15	26.79	127	0.90
193	12.00	34.65	0.22	170	500	7.72	34.49	0.14	26.94	113	1.02
240	11.21	34.65	0.12	156							
315	10.12	34.61	0.15	140							
410	8.84	34.54	0.15	126							
524	7.46	34.49	0.13	109							

150.50

SPENCER F. BAIRD; January 23, 1959; 0756 GCT; 22°22.5'N, 112°35'W; sounding, 1880 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 03°.

2	24.12	34.69	4.66	450	0	(24.12)	(34.69)	(4.66)	(23.39)	(450)	(0.00)
11	24.11	34.61	4.68	455	10	24.11	34.61	4.68	23.34	455	0.04
30	24.07	34.63	4.75	452	20	24.09	34.62	4.70	23.35	454	0.09
40	24.02	34.58	4.61	455	30	24.07	34.63	4.75	23.37	452	0.14
50	23.16	34.54	4.70	434	50	23.16	34.54	4.70	23.56	434	0.22
59	21.24	34.41	4.51	392	75	19.03	34.36	3.65	24.55	340	0.32
69	19.29	34.36	3.78	346	100	15.45	34.47	1.40	25.48	251	0.40
83	17.58	34.36	2.52	306	150	12.89	34.64	0.44	26.15	187	0.51
97	15.56	34.42	1.60	256	200	11.53	34.65	0.20	26.43	161	0.60
111	15.19	34.62	0.81	234	250	11.03	34.69	0.18	26.55	150	0.68
135	13.72	34.62	0.46	204	300	10.35	34.63	0.12	26.63	142	0.75
164	12.36	34.65	0.44	176	400	9.03	34.58	0.08	26.81	125	0.89
198	11.56	34.65	0.20	162	500	7.72	34.53	0.08	26.97	110	1.02
246	11.09	34.69	0.19	150							
322	10.02	34.61	0.10	139							
421	8.76	34.57	0.08	122							
541	7.18	34.51	0.09	104							

SIO
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5901

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

150.60 SPENCER F. BAIRD; January 23, 1959; 0243 GCT; 22°01'N, 113°12'W; sounding, 1995 fm; wind, 360°, force 2; weather, cloudy; sea, rough; wire angle, 07°.

2	24.00	34.58	4.82	454	0	(24.00)	(34.58)	(4.82)	(23.35)	(454)	(0.00)
11	24.00	34.64	4.80	450	10	24.00	34.64	4.80	23.38	450	0.04
30	23.90	34.65	4.78	446	20	23.97	34.65	4.79	23.41	448	0.09
54	22.64	34.54	4.73	420	30	23.90	34.65	4.78	23.43	446	0.13
63	19.74	34.40	3.98	354	50	23.00	34.57	4.75	23.63	427	0.22
72	18.09	34.34	2.87	320	75	17.75	34.33	2.79	24.84	312	0.31
82	17.02	34.32	2.61	296	100	15.38	34.36	1.58	25.42	257	0.39
96	15.50	34.32	1.78	262	150	12.56	34.44	0.90	26.07	195	0.50
110	15.08	34.48	1.04	243	200	11.74	34.68	0.32	26.42	162	0.59
128	13.49	34.51	1.26	208	250	11.20	34.72	0.15	26.54	150	0.67
147	12.65	34.45	0.98	196	300	10.34	34.59	0.23	26.60	145	0.75
170	12.12	34.37	0.66	192	400	8.98	34.55	0.14	26.79	127	0.89
193	11.80	34.60	0.42	170	500	7.72	34.51	0.11	26.96	111	1.01
239	11.36	34.74	0.15	152							
314	10.12	34.57	0.24	143							
408	8.86	34.55	0.12	125							
530	7.36	34.50	0.11	107							

153.16 SPENCER F. BAIRD; January 24, 1959; 22°55'N, 110°07.5'W; sounding, 240 fm; wind, 320°, force 1; weather, clear; sea, slight; wire angle, 03°.

2	22.63	34.76	4.30	404	0	(22.63)	(34.76)	(4.30)	(23.88)	(404)	(0.00)
11	22.60	34.74	4.69	404	10	22.61	34.74	4.69	23.88	404	0.04
30	22.36	34.75	4.40	396	20	22.53	34.74	4.62	23.89	402	0.08
49	19.38	34.43	3.44	344	30	22.36	34.75	4.40	23.96	396	0.12
73	16.78	34.48	1.96	279	50	19.07	34.44	3.32	24.59	336	0.19
97	14.60	34.34	1.63	242	75	16.60	34.48	1.92	25.23	276	0.27
121	14.20	34.51	0.80	222	100	14.60	34.37	1.61	25.60	240	0.34
158	12.50	34.65	0.37	179	150	12.73	34.62	0.42	26.18	185	0.44
197	11.87	34.68	0.24	166	200	11.82	34.68	0.23	26.40	164	0.53
244	11.29	34.69	0.18	154	250	11.21	34.69	0.18	26.51	153	0.62
293	10.85	34.70	0.14	146	300	(10.79)	(34.70)	(0.14)	(26.60)	(145)	(0.69)

153.20 SPENCER F. BAIRD; January 24, 1959; 0632 GCT; 22°47'N, 110°22'W; sounding, 450 fm; wind, 320°, force 3; weather, clear; sea, slight; wire angle, 19°.

3	22.25	34.78	4.84	392	0	(22.25)	(34.78)	(4.84)	(24.00)	(392)	(0.00)
12	22.25	34.76	4.79	393	10	22.25	34.77	4.79	23.99	393	0.04
30	22.20	34.72	4.88	395	20	22.24	34.74	4.84	23.98	394	0.08
39	20.38	34.58	3.45	358	30	22.20	34.72	4.88	23.97	395	0.12
48	19.02	34.52	2.68	328	50	18.76	34.51	2.56	24.73	323	0.19
57	17.72	34.48	2.21	300	75	15.53	34.26	2.17	25.31	267	0.26
66	16.12	34.23	2.46	282	100	14.74	34.44	1.32	25.62	238	0.33
79	15.36	34.30	1.97	261	150	12.73	34.62	0.52	26.18	185	0.43
92	14.99	34.39	1.61	247	200	11.69	34.70	0.36	26.44	160	0.52
105	14.58	34.50	1.10	230	250	11.01	34.71	0.17	26.57	148	0.60
127	13.22	34.57	0.72	198	300	10.48	34.66	0.16	26.63	142	0.68
153	12.68	34.63	0.50	184	400	8.82	34.56	0.24	26.82	124	0.81
183	11.97	34.63	0.36	170	500	7.65	34.55	0.16	27.00	107	0.93
226	11.32	34.73	0.18	151							
296	10.52	34.67	0.16	142							
385	9.04	34.57	0.23	126							
507	7.58	34.55	0.15	106							

SPENCER F. BAIRD; January 24, 1959; 1129 GCT; 22°26.5'N, 110°01'W; sounding, 1760 fm; wind, 340°, force 3; weather, partly cloudy; sea, slight; wire angle, 20°. 153.30

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m
2	23.98	34.70	4.37	445	0	(23.98)	(34.70)	(4.37)	(23.44)	(445)	(0.00)
11	24.02	34.70	4.68	446	10	24.02	34.70	4.68	23.42	446	0.04
29	23.84	34.72	4.73	440	20	23.97	34.71	4.72	23.45	444	0.09
56	22.64	34.69	4.59	409	30	23.83	34.72	4.73	23.50	440	0.13
65	20.90	34.49	4.18	377	50	22.78	34.70	4.62	23.79	412	0.22
73	19.20	34.49	4.13	334	75	18.80	34.45	3.98	24.67	328	0.31
87	17.40	34.25	3.25	310	100	16.37	34.50	1.54	25.30	268	0.39
99	16.42	34.50	1.55	270	150	13.32	34.60	0.67	26.04	198	0.50
113	15.66	34.51	1.45	252	200	11.65	34.61	0.30	26.38	166	0.60
129	14.44	34.58	0.85	222	250	11.05	34.68	0.21	26.54	151	0.68
172	12.46	34.61	0.54	182	300	10.48	34.66	0.15	26.62	143	0.76
194	11.76	34.60	0.32	169	400	9.00	34.57	0.10	26.81	125	0.90
241	11.14	34.68	0.22	152	500	7.70	34.52	0.14	26.97	110	1.02
316	10.28	34.65	0.13	140							
416	8.76	34.56	0.10	122							
547	7.22	34.52	0.16	104							

SPENCER F. BAIRD; January 24, 1959; 1620 GCT; 22°07.5'N, 111°36.5'W; sounding, 1795 fm; wind, 360°, force 2; weather, cloudy; sea, slight; wire angle, 09°. 153.40

2	24.06	34.56	4.82	457	0	(24.06)	(34.56)	(4.82)	(23.32)	(457)	(0.00)
11	24.08	34.56	4.63	458	10	24.07	34.56	4.64	23.31	458	0.04
30	24.26	34.70	4.69	453	20	24.30	34.66	4.63	23.32	457	0.09
58	24.08	34.77	4.47	443	30	24.26	34.70	4.69	23.36	453	0.14
67	22.42	34.69	4.41	404	50	24.20	34.76	4.56	23.42	448	0.23
76	20.62	34.56	3.47	366	75	20.63	34.56	3.48	24.27	366	0.33
91	17.66	34.38	2.65	306	100	16.56	34.51	1.60	25.26	272	0.41
104	16.13	34.51	1.35	262	150	13.69	34.74	0.51	26.07	195	0.53
118	15.08	34.52	1.07	240	200	12.18	34.75	0.16	26.39	165	0.62
136	14.02	34.63	0.56	210	250	11.62	34.76	0.14	26.50	155	0.70
155	13.58	34.78	0.48	190	300	10.91	34.71	0.12	26.59	146	0.78
173	12.33	34.70	0.24	172	400	9.26	34.60	0.10	26.79	127	0.92
206	12.13	34.76	0.15	164	500	7.76	34.52	0.11	26.96	111	1.05
257	11.53	34.76	0.13	153							
337	10.35	34.67	0.10	139							
440	8.55	34.56	0.10	120							
573	6.95	34.48	0.14	104							

SPENCER F. BAIRD; January 24, 1959; 2115 GCT; 21°48'N, 112°13.5'W; sounding, 1835 fm; wind, 360°, force 2; weather, partly cloudy; sea, slight; wire angle, 16°. 153.50

2	24.46	34.24	4.58	492	0	(24.46)	(34.24)	(4.58)	(22.95)	(492)	(0.00)
10	24.40	34.24	4.37	490	10	24.40	34.24	4.37	22.97	490	0.05
29	24.08	34.31	4.64	476	20	24.25	34.28	4.51	23.04	483	0.10
56	23.76	34.65	4.55	441	30	24.07	34.31	4.65	23.12	476	0.14
65	20.62	34.33	4.10	382	50	23.83	34.51	4.61	23.35	454	0.24
75	18.46	34.27	3.69	333	75	18.46	34.27	3.69	24.62	333	0.34
88	16.50	34.25	2.67	290	100	15.05	34.22	2.22	25.39	260	0.41
102	14.78	34.21	2.17	256	150	12.01	34.33	1.20	26.08	194	0.53
115	13.75	34.14	2.04	240	200	11.65	34.65	0.30	26.41	164	0.62
133	12.56	34.24	1.48	210	250	10.96	34.66	0.22	26.54	150	0.70
151	12.00	34.33	1.19	194	300	10.29	34.62	0.17	26.63	142	0.78
179	11.98	34.62	0.32	171	400	9.00	34.58	0.15	26.81	125	0.91
200	11.65	34.65	0.30	164	500	7.83	34.55	0.18	26.97	110	1.04
250	10.96	34.66	0.22	150							
331	9.88	34.60	0.15	137							
428	8.68	34.58	0.15	120							
558	7.19	34.52	0.22	104							

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5901

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

153.60 SPENCER F. BAIRD; January 25, 1959; 0218 GCT; 21°29'N, 112°50'W; sounding, 2000 fm; wind, 040°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°.

2	24.14	34.29	4.58	479	0	(24.14)	(34.29)	(4.58)	(23.08)	(479)	(0.00)
11	24.12	34.25	4.42	481	10	24.12	34.25	4.42	23.06	481	0.05
32	24.01	34.42	4.49	466	20	24.04	34.28	4.44	23.10	478	0.10
59	21.54	34.38	3.83	402	30	24.01	34.40	4.48	23.20	468	0.14
69	20.37	34.42	2.88	368	50	23.99	34.50	3.85	23.28	460	0.24
78	18.30	34.14	4.07	338	75	19.10	34.25	3.65	24.44	350	0.34
92	16.24	34.21	2.76	287	100	15.45	34.21	2.30	25.28	270	0.42
106	14.82	34.20	2.01	258	150	12.75	34.39		25.99	203	0.54
120	13.36	34.11	2.24	234	200	11.59	34.58	0.40	26.36	167	0.63
138	12.99	34.30	1.37	214	250	10.81	34.61	0.33	26.53	152	0.71
157	12.52	34.45	0.20u	194	300	10.10	34.58	0.30	26.63	142	0.79
185	11.88	34.54	0.51	176	400	8.84	34.55	0.24	26.81	125	0.93
209	11.42	34.60	0.37	163	500	7.85		0.20			
260	10.68	34.61	0.32	150	600	6.85		0.15			
342	9.54	34.55	0.28	135							
447	8.38	34.54	0.22	118							
601	6.84	34.31u	0.15								

153.70 SPENCER F. BAIRD; January 25, 1959; 0719 GCT; 21°06'N, 113°29'W; sounding, 2100 fm; wind, 360°, force 2; weather, partly cloudy; sea, slight; wire angle, 14°.

2	24.02	34.33	4.70	473	0	(24.02)	(34.33)	(4.70)	(23.15)	(473)	(0.00)
10	24.00	34.27	4.75	477	10	24.00	34.27	4.75	23.11	477	0.05
30	23.88	34.58	4.78	451	20	24.05	34.28	4.79	23.10	478	0.10
57	23.91	34.70	4.73	443	30	23.88	34.58	4.78	23.38	451	0.14
66	23.64	34.70	4.62	436	50	23.91	34.69	4.75	23.45	444	0.23
75	22.36	34.51	4.43	414	75	22.36	34.51	4.43	23.77	414	0.34
89	18.16	34.18	4.18	332	100	16.40	34.21	2.90	25.07	290	0.43
103	16.06	34.22	2.67	282	150	12.37	34.42	0.94	26.08	194	0.55
116	13.52	34.12	2.21	237	200	11.41	34.60	0.39	26.41	163	0.64
134	13.24	34.33	1.36	215	250	11.05	34.63	0.22	26.49	155	0.72
152	12.35	34.42	0.91	193	300	10.26	34.60	0.17	26.62	143	0.80
179	11.72	34.49	0.66	176	400	8.54	34.52	0.12	26.83	123	0.94
201	11.40	34.60	0.38	163	500	7.38	34.49	0.14	26.99	108	1.06
251	11.04	34.63	0.21	155							
329	9.78	34.58	0.17	137							
431	8.12	34.50	0.11	118							
562	6.72	34.49	0.18	99							

153.80 SPENCER F. BAIRD; January 25, 1959; 1200 GCT; 20°44'N, 114°08'W; sounding, 2055 fm; wind, 360°, force 2; weather, cloudy; sea, slight; wire angle, 06°.

2	24.13	34.19	4.66	486	0	(24.13)	(34.19)	(4.66)	(23.02)	(486)	(0.00)
11	24.14	34.20	4.73	486	10	24.14	34.20	4.73	23.02	486	0.05
30	24.15	34.18	4.66	488	20	24.14	34.19	4.70	23.01	486	0.10
45	23.48	34.44	4.70	450	30	24.15	34.18	4.66	23.00	488	0.14
54	22.87	34.47	4.75	431	50	23.14	34.47	4.74	23.52	438	0.24
64	21.90	34.42	4.46	409	75	19.50	34.19	4.48	24.29	364	0.34
73	20.20	34.28	4.47	375	100	15.98	34.01	4.13	25.01	296	0.42
92	16.65	34.01	4.56	310	150	12.02	34.22	1.75	26.00	201	0.55
106	15.56	34.01	3.73	286	200	11.25	34.53	0.56	26.39	165	0.64
119	14.33	34.14	2.26	252	250	10.58	34.60	0.23	26.56	148	0.72
142	12.25	34.16	2.03	210	300	9.78	34.55	0.24	26.66	139	0.80
171	11.62	34.38	1.02	183	400	8.59	34.52	0.20	26.83	123	0.93
209	11.16	34.56	0.46	161	500	7.57	34.50	0.16	26.97	110	1.06
261	10.42	34.60	0.22	146	600	(6.59)	(34.44)		(27.05)	(102)	(1.17)
341	9.22	34.52	0.23	133							
442	8.16	34.52	0.17	117							
581	6.78	34.45	0.15	103							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; January 27, 1959; 0615 GCT; 22°33'N, 109°23'W; sounding, 1620 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 18°. 157.10

2	22.79	35.00	4.82	391	0	(22.79)	(35.00)	(4.82)	(24.01)	(391)	(0.00)
10	22.79	34.98	4.91	392	10	22.79	34.98	4.91	24.00	392	0.04
29	22.68	34.99	4.94	388	20	22.73	34.99	4.93	24.02	390	0.08
56	21.16	35.02	3.16	346	30	22.67	34.99	4.94	24.04	388	0.12
64	19.38	34.99	2.20	302	50	22.45	35.00	4.77	24.10	382	0.19
73	18.46	34.97	1.86	282	75	18.28	34.97	1.80	25.20	278	0.28
87	16.82	34.92	1.43	248	100	15.30	34.80	1.03	25.78	223	0.34
99	15.38	34.81	1.04	224	150	13.44	34.80	0.52	26.17	186	0.44
112	14.62	34.78	0.92	211	200	12.01	34.77	0.24	26.43	160	0.53
129	14.12	34.82	0.73	198	250	11.28	34.76	0.18	26.56	149	0.61
145	13.60	34.79	0.59	189	300	10.44	34.71	0.17	26.66	139	0.68
171	12.88	34.84	0.33	172	400	8.82	34.69	0.13	26.92	114	0.82
191	12.18	34.78	0.25	163	500	7.42	34.59	0.13	27.06	102	0.93
237	11.48	34.77	0.18	152							
312	10.24	34.70	0.17	136							
411	8.66	34.68	0.13	112							
540	6.86	34.55	0.13	97							

SPENCER F. BAIRD; January 27, 1959; 0717 GCT;[a] 22°33'N, 109°23'W; sounding, 1620 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°. 157.10

2	22.76	35.01	4.88	389	0	(22.76)	(35.01)	(4.88)	(24.03)	(389)
11	22.76	34.96	4.89	392	10	22.76	34.96	4.89	23.99	392
20	22.67	34.96	4.66	390	20	22.67	34.96	4.66	24.02	390
30	22.65	34.96	4.78	390	30	22.65	34.96	4.78	24.02	390
39	22.60	34.94	4.71	390	50	21.90	35.01	3.80	24.27	366
49	22.08	35.01	3.92	370	75	17.10	34.89	1.44	25.43	256
58	20.24	34.98	2.78	325	100	15.00	34.83	0.96	25.86	215
67	18.34	34.92	1.82	283	150	13.14	34.78	0.47	26.21	181
76	16.96	34.88	1.41	253						
86	16.19	34.83	1.27	240						
95	15.32	34.86	1.03	220						
104	14.74	34.80	0.87	212						
113	14.25	34.79	0.76	202						
122	13.90	34.78	0.61	196						
131	13.68	34.78	0.58	192						
140	13.42	34.78	0.52	187						
187	12.26	34.78	0.27	165						

SPENCER F. BAIRD; January 27, 1959; 0815, 0843 GCT;[b] 22°33'N, 109°23'W; sounding, 1639 fm; wind, 280°, force 3; weather, partly cloudy; sea, moderate; wire angle, 11°, 10°. 157.10

127	14.02	34.81	0.64	197						
136	13.78	34.79	0.74	193						
145	13.28	34.76	0.52	186						
154	13.16	34.78	0.48	182						
163	12.64	34.70	0.34	178						
173	12.64	34.74	0.35	175						
182	12.54	34.75	0.39	172						
191	12.30	34.72	0.32	170	150	13.21	34.77	0.51	26.19	184
201	12.12	34.71	0.24	167	200	12.13	34.71	0.25	26.36	167
210	11.89	34.71	0.22	163	250	11.24	34.71	0.16	26.52	152
219	11.74	34.72	0.19	160						
228	11.54	34.70	0.19	158						
238	11.39	34.72	0.18	154						
248	11.26	34.71	0.16	152						
258	11.14	34.70	0.16	151						
267	11.05	34.70	0.15	149						
277	10.94	34.70	0.13	147						

a) Test cast, top.
b) Test cast, middle.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
157.10	SPENCER F. BAIRD; January 27, 1959; 1039 GCT;[a] 22°33'N, 109°23'W; sounding, 1640 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 13°										
255	11.10	34.70	0.17	150							
273	10.88	34.69	0.15	147							
291	10.66	34.69	0.15	144							
309	10.39	34.69	0.13	138							
327	10.20	34.69	0.12	136							
345	9.86	34.67	0.12	132							
363	9.58	34.67	0.13	127							
381	9.22	34.61	0.19	126							
399	9.00	34.61	0.09	123							
418	8.66	34.58	0.28	120							
436	8.44	34.58	0.11	116	300	10.52	34.69	0.14	26.64	141	
455	8.15	34.59	0.09	112	400	8.97	34.61	0.10	26.83	122	
474	7.92	34.56	0.13	110	500	7.57	34.55	0.10	27.00	107	
491	7.72	34.56	0.09	108							
510	7.40	34.52	0.14	106							
528	7.16	34.56	0.13	100							
157.15	SPENCER F. BAIRD; January 27, 1959; 0323 GCT; 22°23'N, 109°41.5'W; sounding, 1730 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 26°.										
2	22.89	34.70	4.83	415	0	(22.89)	(34.70)	(4.83)	(23.76)	(415)	(0.00)
10	22.87	34.70	4.90	414	10	22.87	34.70	4.90	23.77	414	0.04
27	22.66	34.74	4.90	406	20	22.75	34.72	4.90	23.81	410	0.08
52	22.33	34.78	4.82	394	30	22.63	34.74	4.89	23.86	405	0.12
61	21.91	34.69	4.75	389	50	22.38	34.78	4.83	23.97	395	0.20
69	19.42	34.43	3.78	345	75	17.90	34.30	3.27	24.78	318	0.29
83	18.53	34.71	2.28	303	100	15.80	34.60	1.17	25.51	248	0.36
95	16.33	34.55	1.48	264	150	13.58	34.86	0.58	26.19	184	0.47
106	15.41	34.70	0.91	233	200	12.30	34.80	0.26	26.41	163	0.56
122	14.76	34.88	0.95	206	250	11.48	34.77	0.17	26.54	151	0.64
136	14.03	34.88	0.75	192	300	10.67	34.74	0.10	26.64	141	0.72
158	13.32	34.85	0.48	180	400	9.15	34.62	0.08	26.82	124	0.85
175	12.76	34.82	0.35	171	500	(7.76)	(34.57)	(0.12)	(27.00)	(107)	(0.97)
217	12.01	34.79	0.22	160							
284	10.93	34.75	0.12	143							
376	9.49	34.64	0.07	128							
499	7.78	34.57	0.12	107							
157.20	SPENCER F. BAIRD; January 27, 1959; 0037 GCT; 22°14'N, 110°02'W; sounding, 1750 fm; wind, 310°, force 3; weather, clear; sea, rough; wire angle, 10°.										
2	24.18	34.61	4.61	457	0	(24.18)	(34.61)	(4.61)	(23.31)	(457)	(0.00)
11	24.12	34.60	4.55	456	10	24.13	34.60	4.56	23.32	456	0.04
30	23.56	34.70	4.76	433	20	23.92	34.64	4.61	23.41	448	0.09
58	22.50	34.79	4.36	398	30	23.56	34.70	4.76	23.57	433	0.14
67	19.98	34.36	3.91	364	50	22.97	34.78	4.54	23.80	411	0.22
76	18.98	34.60	2.54	321	75	19.03	34.58	2.61	24.72	324	0.31
90	17.32	34.43	2.50	295	100	16.80	34.62	1.29	25.29	269	0.39
104	16.36	34.65	1.22	257	150	13.21	34.75	0.47	26.18	185	0.50
117	15.72	34.88	1.06	227	200	12.13	34.81	0.20	26.44	160	0.59
135	13.94	34.70	0.67	203	250	11.48	34.79	0.17	26.54	150	0.67
153	13.12	34.76	0.45	182	300	10.64	34.69	0.10	26.62	143	0.74
181	12.47	34.80	0.29	167	400	9.19	34.60	0.09	26.79	127	0.88
204	12.08	34.81	0.19	159	500	7.93	34.57	0.10	26.97	110	1.01
255	11.40	34.78	0.17	150							
334	10.13	34.64	0.07	138							
438	8.68	34.58	0.11	120							
569	7.22	34.56	0.10	101							

a) Test cast, bottom.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T}^{-5} 10^{3} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T}^{-5} 10^{3} cm/g	ΔD dyn. m

SPENCER F. BAIRD; January 26, 1959; 1929 GCT; 21°54'N, 110°36.5'W; sounding, 1790 fm; wind, 360°, force 1; weather, partly cloudy; sea, rough; wire angle, 18°. 157.30

2	24.14	34.73	4.46	448	0	(24.14)	(34.73)	(4.46)	(23.42)	(448)	(0.00)
10	24.04	34.73	4.58	445	10	24.04	34.73	4.58	23.44	445	0.04
29	24.03	34.76	4.40	442	20	24.04	34.75	4.50	23.46	444	0.09
56	23.53	34.70	4.20	432	30	24.03	34.76	4.40	23.47	442	0.13
65	23.36	34.71	3.91	427	50	23.60	34.70	4.24	23.56	435	0.22
74	23.14	-	4.53u		75	23.13	34.68	3.91	23.66	424	0.33
87	21.08	34.23	4.01	401	100	17.60	34.42	3.61	24.95	302	0.42
101	17.43	34.45	3.57	296	150	14.15	34.82	0.69	26.04	198	0.54
113	16.22	34.67	1.93	253	200	12.75	34.70	0.33	26.23	180	0.64
131	15.28	34.82	0.98	222	250	11.58	34.58	0.10	26.37	167	0.73
147	14.22	34.82	0.70	200	300	10.88	34.70	0.08	26.58	146	0.82
173	13.64	34.80	0.57	190	400	9.34	34.60	0.10	26.78	128	0.95
194	12.90	34.72	0.36	181	500	7.96	34.54	0.13	26.94	113	1.08
243	11.70	34.58	0.11	170							
319	10.60	34.73	0.07	139							
420	9.01	34.58	0.12	125							
551	7.30	34.51	0.14	106							

SPENCER F. BAIRD; January 26, 1959; 1343 GCT; 21°31.5'N, 111°16.5'W; sounding, 1795 fm; wind, 360°, force 3; weather, clear; sea, moderate; wire angle, 08°. 157.40

2	24.08	34.51	3.67	462	0	(24.08)	(34.51)	(3.67)	(23.26)	(462)	(0.00)
11	24.10	34.47	3.77	465	10	24.10	34.47	3.77	23.23	465	0.05
35	24.05	34.60	4.03	454	20	24.10	34.51	3.83	23.26	462	0.09
44	23.75	34.67	3.90	444	30	24.08	34.57	3.98	23.32	457	0.14
58	20.42	34.43	2.60	370	50	22.30	34.56	3.26	23.82	409	0.23
68	18.80	34.27	3.43	341	75	17.92	34.31	2.93	24.78	318	0.32
77	17.66	34.33	2.76	310	100	15.15	34.45	1.30	25.54	246	0.39
95	15.64	34.42	1.41	258	150	13.00	34.65	0.40	26.14	188	0.50
113	14.24	34.49	1.19	224	200	11.82	34.76	0.21	26.46	158	0.59
127	14.02	34.66	0.67	208	250	11.06	34.74	0.18	26.59	146	0.66
150	13.00	34.65	0.40	188	300	10.35	34.70	0.17	26.68	137	0.74
187	12.03	34.76	0.24	162	400	8.99	34.61	0.14	26.84	122	0.87
225	11.43	34.76	0.18	152	500	7.52	34.54	0.16	27.01	106	0.99
281	10.60	34.72	0.18	140	600	6.61	34.52	0.16	27.12	95	1.10
367	9.52	34.64	0.13	128							
475	7.75	34.54	0.16	109							
618	6.42	34.52	0.16	95							

SPENCER F. BAIRD; January 26, 1959; 0814 GCT; 21°12.5'N, 111°52'W; sounding, 1720 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 35°. 157.50

2	24.28	34.20	4.59	490	0	(24.28)	(34.20)	(4.59)	(22.97)	(490)	(0.00)
10	24.30	34.18	4.69	492	10	24.30	34.18	4.69	22.95	492	0.05
31	24.30	34.19	4.71	491	20	24.30	34.18	4.70	22.96	492	0.10
53	24.15	34.45	4.63	468	30	24.30	34.19	4.71	22.96	491	0.15
61	24.02	34.53	4.67	459	50	24.21	34.34	4.66	23.10	478	0.24
72	22.46	34.44	4.14	422	75	21.63	34.40	3.91	23.88	403	0.35
80	20.60	34.35	3.66	380	100	16.92	34.14	3.76	24.89	307	0.44
94	18.06	34.22	3.90	327	150	12.75	34.22	1.62	25.86	215	0.58
105	16.12	34.09	3.63	292	200	11.93	34.61	0.36	26.33	170	0.68
119	14.72	34.04	3.14	267	250	11.20	34.68	0.16	26.51	154	0.76
136	14.32	34.28	1.72	241	300	10.60	34.68	0.08	26.62	143	0.84
156	12.38	34.23	1.56	208	400	9.28	34.61	0.07	26.79	127	0.98
175	12.35	34.54	0.58	184	500	7.96	34.55	0.08	26.95	111	1.10
218	11.60	34.65	0.23	162							
283	10.82	34.69	0.09	146							
374	9.62	34.63	0.07	131							
503	7.92	34.55	0.08	111							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{3}$ 10^{-5} cm/g	ΔD dyn. m

157.60 SPENCER F. BAIRD; January 26, 1959; 0208 GCT; 20°53.5'N, 112°32'W; sounding, 1300 fm; wind, 330°, force 3; weather, clear; sea, moderate; wire angle, 10°.

2	24.61	34.35	4.62	489	0	(24.61)	(34.35)	(4.62)	(22.98)	(489)	(0.00)
11	24.66	34.34	4.49	490	10	24.65	34.34	4.50	22.97	490	0.05
30	24.78	34.42	4.62	488	20	24.72	34.39	4.54	22.98	489	0.10
58	24.36	34.48	4.56	472	30	24.78	34.42	4.62	22.99	488	0.15
68	23.92	34.70a)	4.49	444	50	24.78	34.42	4.62	22.99	488	0.24
78	20.36	34.46	3.32	366	75	21.30	34.49	3.91	24.04	388	0.35
91	17.74	34.19	3.58	322	100	16.46	34.18	2.76	25.03	294	0.44
105	15.94	34.20	2.39	280	150	12.73	34.37	1.09	25.98	204	0.57
119	14.79	34.21	2.15	256	200	11.75	34.65	0.26	26.39	165	0.66
137	13.27	34.22	1.78	225	250	11.06	34.70	0.13	26.55	150	0.74
156	12.58	34.43	0.84	196	300	10.39	34.66	0.14	26.64	141	0.82
183	11.96	34.61	0.37	172	400	8.94	34.54	0.15	26.79	127	0.96
207	11.66	34.66	0.23	163	500	7.72	34.49	0.13	26.94	113	1.08
258	10.98	34.70	0.13	148							
337	9.84	34.61	0.15	136							
442	8.39	34.51	0.15	121							
574	6.92	34.51	0.11	101							

157.70 SPENCER F. BAIRD; January 25, 1959; 2133 GCT; 20°33'N, 113°06.5'W; sounding, 1820 fm; wind, 350°, force 3; weather, partly cloudy; sea, smooth; wire angle, 13°.

2	24.56	34.16	4.60	500	0	(24.56)	(34.16)	(4.60)	(22.86)	(500)	(0.00)
11	24.46	34.16	4.64	498	10	24.46	34.16	4.64	22.89	498	0.05
30	24.46	34.22	4.74	494	20	24.46	34.18	4.67	22.91	496	0.10
53	24.29	34.47	4.56	471	30	24.46	34.22	4.74	22.93	494	0.15
62	23.52	34.43	4.58	452	50	24.45	34.22	4.74	22.93	494	0.24
71	22.64	34.42	4.71	429	75	21.65	34.40	4.54	23.88	403	0.36
81	19.98	34.32	4.14	366	100	17.30	34.27	2.74	24.90	306	0.45
95	18.04	34.31	2.75	321	150	12.06	34.18	1.69	25.96	205	0.57
109	14.84	34.08	2.93	267	200	11.45	34.62	0.38	26.42	162	0.67
127	13.13	34.07	2.34	233	250	10.96	34.69	0.14	26.56	149	0.75
145	12.32	34.14	1.84	213	300	10.20	34.61	0.17	26.63	142	0.82
168	11.59	34.38	1.22	182	400	8.97	34.58	0.12	26.82	124	0.96
191	11.50	34.58	0.51	166	500	7.49	34.52	0.16	26.99	108	1.08
238	11.12	34.69	0.13	151							
312	10.02	34.60	0.18	140							
409	8.85	34.58	0.11	123							
529	7.02	34.49	0.18	104							

157.80 SPENCER F. BAIRD; January 25, 1959; 1700 GCT; 20°11'N, 113°38.5'W; sounding, 1930 fm; wind, 010°, force 2; weather, partly cloudy; sea, smooth; wire angle, 15°.

2	24.43	34.20	4.64	494	0	(24.43)	(34.20)	(4.64)	(22.93)	(494)	(0.00)
11	24.41	34.16	4.73	496	10	24.41	34.16	4.72	22.91	496	0.05
30	24.42	34.21	4.70	493	20	24.42	34.19	4.72	22.92	495	0.10
57	23.70	34.29	4.79	467	30	24.42	34.21	4.70	22.94	493	0.15
66	23.36	34.38	4.81	451	50	23.99	34.24	4.73	23.09	479	0.24
75	22.94	34.44	4.83	435	75	22.94	34.44	4.83	23.55	435	0.36
89	21.12	34.42	3.54	388	100	18.90	34.35	2.73	24.57	338	0.46
102	18.38	34.33	2.62	326	150	12.49	34.25	1.23	25.93	208	0.58
116	14.50	34.00	3.19	266	200	11.66	34.59	0.35	26.35	168	0.68
123	13.06	34.13	2.02	228	250	11.14	34.69	0.11	26.53	152	0.76
151	12.47	34.27	1.16	206	300	10.60	34.68	0.08	26.62	143	0.84
178	11.84	34.52	0.44	176	400	9.30	34.63	0.08	26.80	126	0.98
201	11.65	34.60	0.32	167	500	7.84	34.54	0.11	26.96	111	1.11
251	11.12	34.69	0.10	151							
330	10.22	34.67	0.07	138							
432	8.84	34.60	0.09	121							
561	6.92	34.50	0.16	102							

a) Loose bottle cap; value falls on property curve.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
60.52-B	I-17	0840	37°54.0'	123°02.0'	45	340°	4	clear	moderate	12.91	33.38
63.55-B	17	0202	37°12.5'	122°50.0'	-	360°	3	partly cloudy	moderate	13.86	33.31
67.50-B	15	2100	36°49.0'	122°04.5'	58	-	1	partly cloudy	slight	13.86	33.52
67.55-B	16	0155	36°39.5'	122°26.0'	1180	290°	1	partly cloudy	rough	14.32	33.31
70.55-B	21	1755	36°03.0'	122°02.0'	700+	250°	2	cloudy	very rough	13.70	33.46
70.80-B	19	0630	35°13.0'	123°48.0'	2000	360°	8	clear	high	13.28	33.18
73.51-B	22	1850	35°35.5'	121°21.0'	160	090°	1	cloudy	calm	14.18	33.40
77.50-B	22	2315	35°04.0'	120°52.0'	75	270°	2	partly cloudy	very rough	14.59	33.58
87.50-B	26	1615	33°20.0'	119°39.5'	40	290°	5	partly cloudy	high	15.26	33.55
93.35-O	19	2030	32°41.5'	117°47.5'	325	090°	1	overcast	moderate	16.44	33.58
93.45-O	19	1430	32°21.0'	118°32.0'	900	280°	2	overcast	rough	16.38	33.49
93.55-O	19	0802	32°01.0'	119°13.0'	880	340°	3	cloudy	moderate	15.94	33.53
97.35-O	17	0020	32°05.5'	117°28.5'	700	240°	5	partly cloudy	moderate	16.13	33.56
97.45-O	17	0400	31°44.0'	118°05.5'	540	340°	4	partly cloudy	moderate	16.58	33.60
97.55-O	17	1100	31°19.0'	118°59.0'	400	calm		partly cloudy	slight	17.30	33.71
100.29-O	15	0737	31°42.5'	116°43.5'	80	340°	1	partly cloudy	moderate	15.46	33.62
100.35-O	15	0228	31°31.5'	117°06.0'	650	320°	4	cloudy	rough	16.43	33.69

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
100.45-O	I-14	1935	31°14.0'	117°49.0'	1100	340°	4	overcast	rough	16.53a)	33.57a)
100.55-O	14	1125	30°55.0'	118°30.0'	1350	360°	5	overcast	moderate	17.18	33.76
103.45-O	12	0600	30°31.0'	117°21.0'	1200	350°	3	cloudy	moderate	16.92	33.64
103.55-O	12	1225	30°03.0'	118°00.0'	1200	320°	2	overcast	moderate	17.10	33.74
107.45-O	11	0245	30°04.0'	117°02.5'	1250	360°	4	overcast	moderate	16.90	33.62
107.55-O	10	2038	29°47.0'	117°39.0'	1600	340°	4	overcast	rough	17.19	33.73
110.45-O	8	0540	29°23.0'	116°39.5'	450	calm		partly cloudy	very rough	18.03	33.82
110.55-O	8	1205	29°01.5'	117°16.0'	1900	calm		partly cloudy	rough	18.15	33.85
113.45-F	8	0805	28°50.0'	116°19.0'	270	260°	2	clear	rough	17.90	33.80
113.55-F	8	1345	28°28.0'	116°58.0'	1830	270°	2	clear	rough	17.91	33.87
117.45-F	10	1046	28°17.5'	115°55.5'	1820	360°	5	clear	rough	17.68	33.83
117.55-F	10	0500	27°57.5'	116°35.0'	2000	360°	5	partly cloudy	rough	18.51	33.98
120.40-F	12	0355	27°56.5'	115°14.0'	23	320°	2	cloudy	moderate	17.92	34.03
120.55-F	12	1145	27°23.0'	116°14.0'	2000	020°	2	cloudy	moderate	18.49	-
123.45-F	14	0256	27°08.0'	115°11.0'	2070	330°	4	partly cloudy	moderate	18.56	34.02
123.55-F	13	2123	26°46.5'	115°55.0'	2050	320°	3	partly cloudy	moderate	19.15	33.98
127.45-F	15	1215	26°32.0'	114°51.0'	1700	360°	4	clear	rough	18.80	34.05

a) Depth, 7 meters.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
127.55-F	I-15	1705	26°13.5'	115°26.5'	1975	360°	3	cloudy	very rough	19.01	34.00
130.45-F	16	2100	25°59.0'	114°30.0'	1800	340°	3	cloudy	rough	21.00	34.44
130.55-F	16	1616	25°42.0'	115°06.5'	2055	360°	2	cloudy	rough	20.86	34.30
133.35-F	17	1417	25°44.0'	113°29.0'	530	040°	2	partly cloudy	moderate	20.98	34.36
133.45-F	17	2045	25°25.0'	114°04.5'	700	260°	1	cloudy	slight	21.37	34.45
133.55-F	18	0123	25°06.0'	114°42.5'	2020	340°	2	cloudy	moderate	20.73	34.33
137.45-F	19	0510	24°50.5'	113°43.5'	1850	340°	1	cloudy	smooth	21.50	34.43
137.55-F	19	0033	24°32.0'	114°19.0'	2120	320°	2	cloudy	smooth	21.98	34.58
140.45-F	20	0547	24°13.5'	113°21.0'	1907	240°	2	overcast	moderate	23.20	34.59
140.55-F	20	1037	23°53.5'	113°57.0'	2300	270°	3	overcast	rough	23.08	34.56
143.45-F	21	0103	23°41.0'	113°05.5'	1940	260°	2	cloudy	moderate	23.30	34.50
143.55-F	20	2010	23°21.5'	113°39.0'	1970	270°	3	cloudy	rough	23.45	34.36
147.35-F	22	0948	23°26.0'	112°02.5'	1740	330°	1	partly cloudy	slight	23.33	34.62
147.45-F	22	1500	23°06.5'	112°42.5'	1940	050°	2	partly cloudy	rough	22.94	34.56
147.55-F	22	1920	22°48.0'	113°13.0'	1900	310°	1	cloudy	rough	23.76	34.40
150.35-F	23	1520	22°52.5'	111°42.0'	1815	340°	3	cloudy	moderate	23.56	34.67
150.45-F	23	1025	22°32.5'	112°17.0'	1815	330°	2	cloudy	moderate	23.20	34.70

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
150.55-F	I-23	0526	22°12.5'	112°52.5'	1897	-	1	partly cloudy	moderate	24.00	34.64
153.25-F	24	0903	22°36.5'	110°41.5'	1370	340°	3	partly cloudy	slight	23.20	34.69
153.35-F	24	1402	22°16.0'	111°19.5'	1850	340°	2	partly cloudy	slight	24.30	34.66
153.45-F	24	1848	21°57.5'	111°55.0'	1800	030°	2	partly cloudy	slight	23.95	34.34
153.55-F	24	2345	21°38.5'	112°32.0'	1850	030°	1	partly cloudy	smooth	24.80	34.38
157.25-F	26	2207	22°03.5'	110°19.5'	1740	320°	2	partly cloudy	rough	24.18	34.70
157.35-F	26	1700	21°43.5'	110°55.5'	1825	020°	2	clear	moderate	24.64	34.44
157.45-F	26	1103	21°22.0'	111°34.5'	1850	350°	2	partly cloudy	moderate	24.46	34.49
157.55-F	26	0458	21°03.0'	112°09.5'	1270	330°	3	clear	moderate	24.43	34.19

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

73.51

ORCA; February 11, 1959; 0038 GCT; 35°36'N, 121°20.5'W; sounding, 110 fm; wind, 220°, force 6; weather, rain; sea, very rough; wire angle, 25°.

1	13.63	33.44	5.96	289	0	(13.63)	(33.44)	(5.96)	(25.09)	(289)	(0.00)
10	13.63	33.43	5.93	290	10	13.63	33.43	5.93	25.08	290	0.03
29	13.62	33.46	6.03	287	20	13.63	33.45	5.98	25.09	288	0.06
47	13.52	33.49	5.76	283	30	13.63	33.46	6.02	25.10	287	0.09
70	11.57	33.62	4.03	238	50	13.40	33.50	5.60	25.18	280	0.14
93	10.56	33.69	3.42	215	75	11.30	33.64	3.87	25.68	232	0.21
116	10.15	33.78	3.13	202	100	10.46	33.70	3.36	25.88	212	0.26
154	9.16	33.94	2.40	174	150	9.26	33.92	2.49	26.25	178	0.36
192	8.29	34.08	1.81	151	200	(8.08)	(34.10)	(1.72)	(26.58)	(147)	(0.44)

73.53

ORCA; February 10, 1959; 2302 GCT; 35°39'N, 121°26.5'W; sounding, 250 fm; wind, 220°, force 5; weather, overcast; sea, very rough; wire angle, 25°.

1	13.68	33.47	5.91	288	0	(13.68)	(33.47)	(5.91)	(25.10)	(288)	(0.00)
10	13.70	33.47	5.87	288	10	13.70	33.47	5.87	25.10	288	0.03
29	13.69	33.50	5.85	286	20	13.70	33.49	5.86	25.11	286	0.06
47	12.50	33.46	4.75	266	30	13.69	33.50	5.85	25.12	285	0.09
69	11.24	33.43	4.45	246	50	12.06	33.45	4.62	25.40	259	0.14
91	10.21	33.67	3.67	211	75	11.18	33.44	4.43	25.55	244	0.20
113	10.06	33.76	3.29	202	100	10.13	33.74	3.37	25.97	204	0.26
147	9.48	33.87	2.64	185	150	9.45	33.89	2.58	26.20	183	0.36
182	9.16	33.99	2.27	171	200	8.98	34.00	2.15	26.36	167	0.45
226	8.69	34.03	1.99	161	250	8.40	34.06	1.84	26.50	154	0.53
271	8.14	34.10	1.70	148	300	7.82	34.14	1.50	26.65	140	0.60
370	7.19	34.23	1.00	125							

73.55

ORCA; February 10, 1959; 2124 GCT; 35°35'N, 121°33.5'W; sounding, 600 fm; wind, 220°, force 5; weather, rain; sea, rough; wire angle, 25°.

1	13.54	33.48	5.83	284	0	(13.54)	(33.48)	(5.83)	(25.14)	(284)	(0.00)
11	13.54	33.58	5.84	277	10	13.54	33.57	5.84	25.20	278	0.03
34	13.58	33.52	5.82	282	20	13.55	33.56	5.83	25.20	278	0.06
61	11.90	33.51	4.38	252	30	13.57	33.52	5.83	25.16	282	0.08
69	11.55	33.51	4.29	246	50	12.32	33.51	4.80	25.39	260	0.14
89	10.10	33.54	4.17	219	75	10.50	33.52	4.22	25.74	227	0.20
101	9.69	33.60	3.87	208	100	9.70	33.59	3.90	25.92	209	0.25
114	9.42	33.68	3.62	198	150	8.98	33.83	3.10	26.23	180	0.35
140	9.12	33.81	3.22	184	200	8.50	33.98	2.38	26.42	162	0.44
156	8.90	33.85	2.99	177	250	8.05	34.12	1.76	26.60	144	0.52
181	8.69	33.95	2.64	166	300	7.58	34.12	1.52	26.67	138	0.59
211	8.40	34.00	2.27	159	400	6.39	34.18	0.88	26.88	118	0.72
235	8.18	34.12	1.91	147	500	5.83	34.22	0.69	26.97	109	0.84
276	7.80	34.12	1.59	141							
330	7.30	34.15	1.44	132							
416	6.25	34.19	0.81	116							
496	5.86	34.21	0.72	110							
564	5.46	34.28	0.31	100							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
73.57	ORCA; February 10, 1959; 1934 GCT; 35°31'N, 121°40'W; sounding, 600 fm; wind, 220°, force 3; weather, drizzle; sea, rough; wire angle, 20°.										
2	13.58	33.42	5.88	289	0	(13.58)	(33.42)	(5.88)	(25.08)	(289)	(0.00)
11	13.58	33.48	6.05	285	10	13.58	33.48	6.05	25.12	285	0.03
30	13.58	33.48	5.89	285	20	13.58	33.48	6.05	25.12	285	0.06
58	13.57	33.51	5.80	282	30	13.58	33.48	5.89	25.12	285	0.08
67	12.36	33.39	5.15	269	50	13.58	33.49	5.84	25.13	284	0.14
82	10.87	33.51	4.31	234	75	10.90	33.50	4.35	25.64	236	0.21
96	10.50	33.60	4.06	221	100	10.00	33.68	3.64	25.94	207	0.26
110	9.95	33.69	3.59	205	150	8.88	33.90	2.68	26.30	173	0.36
132	9.20	33.82	3.10	184	200	8.43	34.07	2.07	26.50	154	0.44
151	8.87	33.91	2.67	173	250	7.72	34.16	1.59	26.68	138	0.52
178	8.60	34.02	2.28	160	300	7.08	34.15	1.39	26.75	130	0.59
206	8.36	34.09	1.99	152	400	6.32	34.21	0.84	26.92	115	0.71
233	7.98	34.16	1.68	140	500	5.78	34.30	0.44	27.05	102	0.83
279	7.32	34.14	1.48	133							
328	6.81	34.32r	1.22								
407	6.27	34.22	-	114							
487	5.84	34.29	0.48	104							
570	5.28	34.34	0.38	93							
73.60	ORCA; February 10, 1959; 1725 GCT; 35°24'N, 121°52.5'W; sounding, 1300 fm; wind, 220°, force 3; weather, cloudy; sea, rough; wire angle, 15°.										
1	13.85	33.39	5.77	297	0	(13.85)	(33.39)	(5.77)	(25.00)	(297)	(0.00)
11	13.84	33.37	5.83	298	10	13.84	33.38	5.83	24.98	298	0.03
31	13.81	33.42	5.82	294	20	13.83	33.39	5.82	25.00	296	0.06
59	12.16	33.36	5.15	267	30	13.82	33.42	5.82	25.03	294	0.09
69	10.88	33.39	4.25	243	50	13.70	33.42	5.80	25.05	292	0.15
83	10.08	33.57	4.03	217	75	10.10	33.56	4.04	25.83	218	0.21
97	9.35	33.64	3.93	200	100	9.30	33.65	3.89	26.04	198	0.26
111	9.18	33.68	3.64	194	150	8.56	33.92	2.79	26.37	167	0.36
132	8.82	33.80	3.24	180	200	7.99	34.05	2.13	26.56	149	0.44
151	8.56	33.92	2.79	167	250	7.62	34.14	1.65	26.68	138	0.51
178	8.32	33.99	2.41	158	300	7.29	34.18	1.32	26.75	130	0.58
204	7.92	34.07	-	146	400	6.54	34.24	0.82	26.91	115	0.71
231	7.68	34.11	1.84	140	500	5.90	34.31	0.51	27.04	103	0.82
277	7.52	34.17	1.37	134							
327	7.00	34.19	1.28	126							
405	6.52	34.25	0.80	114							
485	5.99	34.30	0.53	104							
567	5.52	34.34	0.39	96							
73.70	ORCA; February 10, 1959; 1155 GCT; 34°56.5'N, 122°39'W; sounding, 2000 fm; wind, 330°, force 4; weather, missing; sea, rough; wire angle, 04°.										
1	13.86	33.33	5.76	302	0	(13.86)	(33.33)	(5.76)	(24.95)	(302)	(0.00)
11	13.86	33.45	5.72	293	10	13.86	33.44	5.73	25.04	294	0.03
31	13.88	33.37	5.70	299	20	13.88	33.43	5.72	25.02	295	0.06
62	13.48	33.45	5.63	285	30	13.88	33.37	5.70	24.98	299	0.09
72	10.81	33.43	4.45	239	50	13.88	33.37	5.70	24.98	299	0.15
87	10.23	33.46	4.24	227	75	10.69	33.43	4.40	25.63	237	0.22
102	9.54	33.60	3.67	205	100	9.65	33.57	3.77	25.92	210	0.27
117	9.10	33.75	3.52	188	150	8.68	33.88	2.73	26.32	171	0.37
142	8.74	33.87	2.82	173	200	7.93	34.04	2.24	26.56	149	0.45
162	8.55	33.95	2.44	164	250	7.46	34.12	1.79	26.68	137	0.52
192	8.06	34.04	2.30	151	300	6.94	34.12	1.38	26.76	130	0.59
222	7.63	34.04	2.08	145	400	6.28	34.22	0.68	26.92	114	0.72
252	7.44	34.12	1.78	137	500	5.68	34.27	0.44	27.04	103	0.83
301	6.93	34.12	1.35	129	600	5.05	34.34	0.37	27.16	92	0.93
356	6.50	34.20	0.90	118							
440	6.08	34.23	0.48	111							
526	5.49	34.29	0.42	99							
610	5.01	34.34	0.36	90							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3^{-5}	Z	T	S	O_2	σ_t	δT_3^{-5}	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

ORCA; February 11, 1959; 0705 GCT; 35°04.5'N, 120°52'W; sounding, 90 fm; wind, 200°, force 5; weather, rain; sea, very rough; wire angle, 25°. 77.50

2a)	13.42	33.43	5.89	286	0	(13.42)	(33.43)	(5.89)	(25.11)	(286)	(0.00)
11	13.41	33.40	5.95	288	10	13.41	33.40	5.95	25.10	288	0.03
29	13.26	33.44	5.68	282	20	13.34	33.41	5.86	25.11	286	0.06
47	13.02	33.49	5.51	274	30	13.25	33.44	5.67	25.16	282	0.08
68	12.80	33.51	5.34	268	50	12.99	33.50	5.47	25.26	272	0.14
88	11.57	33.64	4.11	236	75	12.49	33.54	5.03	25.38	260	0.21
105	11.04	33.72	3.73	221	100	11.06	33.69	3.86	25.76	224	0.27
124	10.70	33.78	3.47	211							

ORCA; February 11, 1959; 0930 GCT; 34°58'N, 121°04.5'W; sounding, 250 fm; wind, 200°, force 5; weather, cloudy; sea, very rough; wire angle, 13°. 77.53

2	13.80	33.35	5.83	299	0	(13.80)	(33.35)	(5.83)	(24.98)	(299)	(0.00)
11	13.80	33.33	5.80	300	10	13.80	33.33	5.80	24.96	300	0.03
31	13.80	33.37	5.89	298	20	13.80	33.35	5.85	24.98	299	0.06
51	13.57	33.50	5.73	283	30	13.80	33.37	5.89	24.99	298	0.09
75	12.78	33.57	4.98	263	50	13.59	33.50	5.75	25.13	284	0.15
99	11.44	33.58	4.18	239	75	12.78	33.57	4.98	25.36	263	0.22
124	10.12	33.68	3.44	209	100	11.38	33.58	4.14	25.62	238	0.28
162	9.52	33.86	2.64	186	150	9.73	33.79	2.94	26.08	194	0.39
201	8.70	34.00	2.25	163	200	8.71	34.00	2.26	26.41	163	0.48
248	7.95	34.16	1.59	140	250	7.93	34.16	1.58	26.65	140	0.56
297	7.62	34.18	1.34	135	300	7.61	34.18	1.33	26.71	134	0.63
400	6.98	34.24	0.84	121	400	6.98	34.24	0.84	26.85	121	0.76

ORCA; February 11, 1959; 1132, 1203 GCT; 34°54'N, 121°13'W; sounding, 320 fm; wind, 200°, force 5; weather, partly cloudy; sea, very rough; wire angle, 00°, 05°. 77.55

1	13.66	33.46	5.82	288	0	(13.66)	(33.46)	(5.82)	(25.10)	(288)	(0.00)
11	13.66	33.46	5.79	288	10	13.66	33.46	5.79	25.10	288	0.03
31	13.65	33.46	5.74	288	20	13.66	33.46	5.76	25.10	288	0.06
56	13.13	33.53	5.12	272	30	13.65	33.46	5.74	25.10	288	0.09
66	12.66	33.55	5.07	262	50	13.57	33.47	5.64	25.12	286	0.14
76	12.04	33.49	4.70	256	75	12.15	33.50	4.80	25.42	257	0.21
91	11.34	33.58	3.90	237	100	10.07	33.64	3.88	25.90	211	0.27
107	9.76	33.67	3.85	204	150	9.27	33.86	2.83	26.21	182	0.37
132	9.43	33.84	2.99	186	200	8.60	34.04	2.30	26.45	159	0.46
151	9.26	33.86	2.83	182	250	8.04	34.11	1.71	26.59	145	0.53
177	8.92	33.98	2.53	168	300	7.69	34.15	1.42	26.68	138	0.61
207	8.48	34.05	2.21	156	400	6.94	34.25	0.81	26.86	120	0.74
237	8.16	34.10	1.80	148	500	6.16	34.26	0.55	26.96	110	0.86
277	7.84	34.13	1.56	142							
338	7.42	34.20	1.16	130							
408	6.88	34.25	0.79	120							
483	6.31	34.26	0.59	111							
564	5.51	34.26b)	0.38	102							

ORCA; February 12, 1959; 2025 GCT; 34°54'N, 121°23'W; sounding, 268 fm; wind, 270°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°. 77.57

2	14.04	33.34	5.74	305	0	(14.04)	(33.34)	(5.74)	(24.92)	(305)	(0.00)
12	13.97	33.31	5.67	305	10	13.99	33.32	5.68	24.92	305	0.03
31	13.94	33.27	-	308	20	13.96	33.30		24.90	306	0.06
159c)	9.40	33.82	3.18		30	13.94	33.27		24.88	308	0.09
197c)	8.59	33.97	2.49								
245c)	7.95	34.14	1.70								
293c)	7.42	34.19	1.42								
396c)	6.52	34.30	0.61								

a) Depths may be slightly in error owing to hydrographic weight dragging on bottom.
b) Salinity bottle number was not recorded on the data sheet. Since standard handling and titrating procedures were used, this salinity value is assumed to be listed correctly.
c) Pretrip; too uncertain for interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m

77.60 ORCA; February 12, 1959; 2305 GCT; 34°45'N, 121°36'W; sounding, 500 fm; wind, 270°, force 3; weather, partly cloudy; sea, rough; wire angle, 19°.

1	13.66	33.33	5.74	298	0	(13.66)	(33.33)	(5.74)	(24.99)	(298)	(0.00)
10	13.62	33.30	5.62	300	10	13.62	33.30	5.62	24.97	300	0.03
29	13.56	33.31	5.68	297	20	13.59	33.30	5.64	24.99	298	0.06
58	13.52	33.33	5.82	294	30	13.56	33.31	5.69	25.00	296	0.09
67	12.80	33.33	5.39	282	50	13.53	33.32	5.74	25.01	296	0.15
82	10.76	33.31	4.91	246	75	11.44	33.31	5.07	25.40	259	0.22
96	10.32	33.47	4.24	227	100	10.09	33.51	4.13	25.80	221	0.28
110	9.48	33.60	3.91	205	150	8.90	33.89	2.85	26.28	174	0.38
133	9.08	33.81	3.05	183	200	8.08	34.01	2.64	26.51	153	0.46
152	8.89	33.89	2.84	174	250	7.53	34.07	1.81	26.64	141	0.54
179	8.44	33.96	2.89	162	300	6.88	34.12	1.26	26.77	129	0.60
207	7.97	34.03	2.46	150	400	6.33	34.19	0.89	26.90	117	0.73
235	7.72	34.05	2.08	145	500	5.79	34.30	0.52	27.04	102	0.85
281	7.10	34.11	1.38	133							
332	6.64	34.14	1.15	124							
413	6.27	34.20	0.82	115							
494	5.82	34.29	0.54	103							
577	5.50	34.34	0.34	96							

77.70 ORCA; February 13, 1959; 0428 GCT; 34°25.5'N, 122°16.5'W; sounding, 2200 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.

1	14.03	33.31	5.76	306	0	(14.03)	(33.31)	(5.76)	(24.90)	(306)	(0.00)
11	14.04	33.30	5.74	308	10	14.04	33.30	5.74	24.89	307	0.03
30	14.06	33.33	5.65	306	20	14.05	33.32	5.69	24.89	307	0.06
61	14.00	33.30	5.70	307	30	14.06	33.33	5.65	24.90	306	0.09
71	13.40	33.29	5.71	296	50	14.05	33.32	5.69	24.89	307	0.15
86	10.96	33.29	5.01	251	75	11.90	33.29	5.31	25.30	268	0.22
101	10.06	33.36	4.71	232	100	10.10	33.36	4.75	25.67	233	0.29
116	9.38	33.49	4.35	211	150	8.92	33.82	3.28	26.23	180	0.39
139	9.02	33.66	3.95	194	200	8.17	34.02	2.50	26.50	154	0.48
160	8.81	33.91	2.84	172	250	7.58	34.04	2.24	26.60	144	0.56
191	8.32	34.00	2.68	157	300	7.04	34.12	1.52	26.74	131	0.62
220	7.86	34.04	2.20	148	400	6.36	34.20	0.72	26.90	117	0.75
250	7.58	34.04	2.24	144	500	5.63	34.25	0.50	27.03	104	0.87
299	7.05	34.12	1.53	131	600	4.90	34.27	0.37	27.13	95	0.97
353	6.66	34.15	1.07	124							
437	6.14	34.23	0.59	112							
521	5.46	34.25	0.48	102							
605	4.88	34.27	0.35	94							

80.53 ORCA; February 14, 1959; 1430 GCT; 34°23'N, 120°40'W; sounding, 244 fm; wind, direction missing, force 1; weather, cloudy; sea, moderate; wire angle, 00°.

0	14.03	33.55	5.96	289	0	14.03	33.55	5.96	25.08	289	0.00
10	14.02	33.54	6.09	289	10	14.02	33.54	6.09	25.08	289	0.03
30	13.88	33.54	6.01	286	20	14.00	33.54	6.08	25.08	289	0.06
50	12.96	33.53	5.13	269	30	13.88	33.54	6.01	25.11	286	0.09
75	11.06	33.66	3.62	226	50	12.96	33.53	5.13	25.29	269	0.14
100	10.86	33.68	3.49	221	75	11.06	33.66	3.62	25.74	226	0.20
125	10.34	33.73	3.30	208	100	10.86	33.68	3.49	25.80	221	0.26
165	9.62	33.86	2.86	188	150	9.89	33.80	3.04	26.06	196	0.37
206	9.16	33.98	2.41	172	200	9.22	33.96	2.50	26.30	174	0.46
256	8.5 a)	34.07	1.75	155	250	8.59	34.06	1.82	26.47	156	0.54
306	7.98	34.12	1.50	144	300	8.03	34.11	1.55	26.60	145	0.62
411	7.24	34.22	1.10	126	400	7.30	34.21	1.14	26.78	128	0.76

a) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; February 14, 1959; 1215 GCT; 34°16.5'N, 120°49.5'W; sounding, 415 fm; wind, direction missing, force 1; weather, missing; sea, moderate; wire angle, 01°. 80.55

1	14.06	33.56	5.89	289	0	(14.06)	(33.56)	(5.89)	(25.08)	(289)	(0.00)
11	14.06	33.62	5.99	284	10	14.06	33.62	5.99	25.13	284	0.03
31	14.08	33.50	5.94	293	20	14.07	33.57	5.97	25.09	288	0.06
41	12.52	33.46	5.23	267	30	14.08	33.50	5.95	25.04	293	0.09
52	11.66	33.43	4.77	254	50	11.72	33.43	4.82	25.44	255	0.14
67	10.96	33.57	4.03	231	75	10.71	33.63	3.84	25.78	222	0.20
82	10.53	33.68	3.69	215	100	9.92	33.75	3.29	26.02	200	0.25
102	9.86	33.76	3.27	199	150	9.03	33.96	2.62	26.33	171	0.35
127	9.38	33.86	2.91	184	200	8.38	34.03	2.09	26.48	156	0.43
147	9.05	33.96	2.64	172	250	8.13	34.10	1.81	26.57	147	0.51
177	8.64	33.98	2.30	164	300	7.79	34.16	1.45	26.67	138	0.58
207	8.35	34.04	2.03	155	400	6.98	34.28	0.84	26.88	118	0.71
236	8.18	34.09	1.86	148	500	6.26	34.29	0.55	26.98	108	0.83
277	7.98	34.13	1.64	143							
337	7.44	34.20	1.09	131							
412	6.9 a)	34.29	0.82	116							
488	6.33	34.28	0.58	110							
568	5.80	34.34	0.42	99							

ORCA; February 14, 1959; 1020 GCT; 34°13'N, 120°56'W; sounding, 500 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 00°. 80.57

1	13.52	33.53	6.12	280	0	(13.52)	(33.53)	(6.12)	(25.17)	(280)	(0.00)
11	13.51	33.51	6.06	281	10	13.51	33.51	6.06	25.16	281	0.03
31	13.49	33.51	5.84	281	20	13.50	33.51	5.96	25.16	281	0.06
41	13.46	33.55	5.91	278	30	13.49	33.51	5.85	25.16	281	0.08
51	11.74	33.48	4.82	251	50	11.90	33.49	4.93	25.46	253	0.14
66	11.00	33.44	4.48	241	75	10.46	33.46	4.37	25.69	231	0.20
81	10.31	33.48	4.32	227	100	9.95	33.73	3.38	26.00	202	0.25
101	9.94	33.73	3.37	202	150	8.89	33.96	2.50	26.34	169	0.35
126	9.29	33.83	3.09	185	200	8.44	34.05	2.01	26.48	156	0.43
146	8.92	33.95	2.53	149	250	8.07	34.13	1.71	26.61	144	0.51
176	8.67	34.00	2.25	163	300	7.71	34.16	1.38	26.68	138	0.58
207	8.39	34.06	1.95	154	400	6.75	34.28	0.77	26.91	116	0.71
236	8.14	34.13	1.78	146	500	6.12	34.32	0.44	27.02	104	0.82
277	7.93	34.14	1.52	141							
337	7.28	34.20	1.09	129							
412	6.67	34.29	0.70	114							
487	6.20	34.32	0.46	106							
568	5.68	34.31	0.38	100							

ORCA; February 14, 1959; 0811 GCT; 34°08'N, 121°08'W; sounding, 1200 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 00°. 80.60

1	13.67	33.57	6.16	280	0	(13.67)	(33.57)	(6.16)	(25.17)	(280)	(0.00)
11	13.66	33.63	6.28	276	10	13.66	33.62	6.28	25.22	276	0.03
31	13.56	33.55	6.07	279	20	13.61	33.60	6.19	25.20	277	0.06
56	12.98	33.53	5.38	270	30	13.57	33.55	6.07	25.18	279	0.08
66	12.37	33.56	4.27	256	50	13.40	33.54	5.91	25.20	277	0.14
76	11.38	33.60	3.99	236	75	11.46	33.60	3.99	25.62	237	0.20
91	10.29	33.56	4.02	221	100	9.88	33.60	3.94	25.90	211	0.26
106	9.66	33.64	3.82	204	150	8.89	33.90	2.93	26.30	173	0.36
131	9.10	33.82	3.22	182	200	8.48	34.06	2.02	26.49	155	0.44
152	8.88	33.91	2.91	172	250	7.96	34.16	1.58	26.64	141	0.52
177	8.69	34.00	2.33	163	300	7.52	34.19	1.27	26.73	132	0.58
207	8.40	34.08	1.95	153	400	6.75	34.29	0.73	26.92	115	0.71
237	8.10	34.14	1.67	144	500	6.08	34.34	0.44	27.05	102	0.83
277	7.66	34.18	1.40	135							
337	7.36	34.23	1.05	127							
412	6.67	34.30	0.67	113							
488	6.17	34.34	0.45	103							
568	5.58	34.33	0.34	97							

a) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

80.70 ORCA; February 14, 1959; 0221 GCT; 33°49'N, 121°45'W; sounding, 2000 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.

1	14.72	33.47	5.73	308	0	(14.72)	(33.47)	(5.73)	(24.88)	(308)	(0.00)
11	14.54	33.46	5.86	306	10	14.55	33.46	5.85	24.90	306	0.03
31	14.51	33.46	5.80	305	20	14.52	33.46	5.83	24.91	305	0.06
56	14.50	33.40	5.75	309	30	14.51	33.46	5.80	24.91	305	0.09
66	14.48	33.45	5.59	305	50	14.50	33.40	5.77	24.87	309	0.15
76	14.20	33.45	5.68	300	75	14.28	33.45	5.66	24.96	301	0.23
91	11.87	33.45	4.73	256	100	11.20	33.47	4.57	25.57	243	0.30
106	10.82	33.50	4.45	234	150	9.20	33.82	3.01	26.18	184	0.40
132	9.61	33.70	3.53	200	200	8.76	34.04	2.12	26.42	162	0.49
152	9.18	33.83	2.98	183	250	8.26	34.10	1.80	26.55	150	0.57
177	8.94	34.01	2.34	166	300	7.75	34.16	1.46	26.68	137	0.65
207	8.70	34.04	2.07	160	400	6.78	34.26	0.87	26.89	117	0.78
237	8.39	34.07	1.87	153	500	6.26	34.29	0.50	26.98	108	0.90
277	7.97	34.14	1.63	142							
337	7.38	34.20	1.13	130							
412	6.69	34.27	0.80	115							
487	6.32	34.29	0.52	109							
568	5.82	34.29	0.40	104							

80.80 ORCA; February 13, 1959; 2038, 2111 GCT; 33°31.5'N, 122°29'W; sounding, 2000 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 01°, 00°.

2	14.56	33.41	5.69	310	0	(14.56)	(33.41)	(5.69)	(24.87)	(310)	(0.00)
12	14.47	33.44	5.63	306	10	14.48	33.43	5.64	24.90	306	0.03
32	14.48	33.48	5.60	303	20	14.47	33.46	5.62	24.92	304	0.06
58	14.47	33.44	5.65	306	30	14.48	33.48	5.61	24.93	303	0.09
68	14.46	33.44	5.72	306	50	14.47	33.45	5.64	24.91	306	0.15
78	13.68	33.40	5.52	293	75	14.28	33.42	5.71	24.93	303	0.23
93	11.81	33.44	4.83	255	100	11.15	33.46	4.66	25.58	242	0.30
108	10.54	33.49	4.50	230	150	9.31	33.72	3.62	26.09	193	0.41
133	9.54	33.62	3.92	204	200	8.27	34.00	2.40	26.47	157	0.50
153	9.26	33.74	3.57	192	250	7.86	34.08	1.86	26.59	145	0.57
					300	7.42	34.14	1.48	26.70	135	0.64
178	8.62	33.93	2.75	168	400	6.44	34.17	0.96	26.86	120	0.78
208	8.18	34.03	2.26	153	500	6.03	34.31	0.54	27.02	105	0.90
238	7.92	34.05	2.00	148							
278	7.70	34.13	1.56	139							
339	6.86	34.14	1.36	127							
414	6.39	34.18	0.86	118							
488	6.11	34.29	0.56	106							
569	5.54	34.40	0.40	91							

80.90 ORCA; February 13, 1959; 1447 GCT; 33°10.5'N, 123°17.5'W; sounding, 2100 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 06°.

1	14.26	33.30	5.82	311	0	(14.26)	(33.30)	(5.82)	(24.85)	(311)	(0.00)
11	14.25	33.33	5.84	310	10	14.25	33.33	5.84	24.86	310	0.03
31	14.28	33.30	5.65	312	20	14.25	33.32	5.76	24.85	311	0.06
56	13.74	33.32	5.80	300	30	14.27	33.30	5.66	24.84	312	0.09
66	13.23	33.28	5.57	293	50	13.95	33.32	5.75	24.92	305	0.16
76	12.32	33.24	5.40	279	75	12.40	33.24	5.42	25.17	281	0.23
91	11.37	33.37	5.10	252	100	10.45	33.42	4.90	25.66	234	0.29
106	10.36	33.43	4.87	231	150	8.85	33.74	4.20	26.18	185	0.40
131	9.20	33.60	4.27	200	200	8.18	33.99	3.43	26.48	156	0.48
151	8.83	33.74	4.19	185	250	7.64	34.11	1.83	26.64	140	0.56
176	8.48	33.93	3.66	165	300	6.93	34.12	1.45	26.76	130	0.63
206	8.11	34.01	3.37	154	400	6.01	34.17	0.84	26.92	114	0.76
236	7.81	34.09	2.04	144	500	5.52	34.26	0.49	27.06	102	0.87
275	7.32	34.12	1.59	135							
336	6.42	34.13	1.25	122							
410	5.98	34.18	0.79	113							
484	5.60	34.25	0.50	104							
564	5.26	34.34	0.39	93							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; February 14, 1959; 1943 GCT; 34°14.5'N, 119°59.5'W; sounding, 316 fm; wind, 090°, force 3; weather, cloudy; sea, slight; wire angle, 07°.											82.47
1	14.36	33.51	6.06	298	0	(14.36)	(33.51)	(6.06)	(24.99)	(298)	(0.00)
11	14.31	33.56	5.96	294	10	14.32	33.56	5.97	25.04	294	0.03
31	14.28	33.55	5.76	294	20	14.30	33.56	5.86	25.04	294	0.06
51	13.30	33.55	4.93	274	30	14.29	33.55	5.77	25.04	294	0.09
76	11.50	33.57	4.04	240	50	13.40	33.55	5.00	25.21	277	0.14
101	10.71	33.68	3.49	218	75	11.51	33.57	4.05	25.59	241	0.21
125	10.25	33.80	2.99	202	100	10.72	33.68	3.50	25.82	219	0.27
165	9.50	33.98	2.37	177	150	9.72	33.93	2.55	26.18	184	0.37
205	9.10	34.07	2.07	164	200	9.15	34.06	2.10	26.38	166	0.46
254	8.5 a)	34.15	1.50	149	250	8.54	34.15	1.55	26.55	150	0.54
303	7.98	34.18	1.38	139	300	8.01	34.18	1.40	26.65	140	0.62
407	7.14	34.22	0.80	125	400	7.19	34.22	0.85	26.80	126	0.75
ORCA; February 15, 1959; 0101 GCT; 34°14'N, 119°22'W; sounding, 12 fm; wind, direction missing, force 1; weather, cloudy; sea, slight; wire angle, 01°.											83.40
1	14.58	33.60	5.85	296	0	(14.58)	(33.60)	(5.85)	(25.01)	(296)	(0.00)
11	14.42	33.53	5.91	298	10	14.43	33.53	5.91	24.99	298	0.03
ORCA; February 14, 1959; 2315 GCT; 34°08'N, 119°33.5'W; sounding, 128 fm; wind, 120°, force 3; weather, cloudy; sea, slight; wire angle, 03°.											83.43
1	14.56	33.51	5.87	302	0	(14.56)	(33.51)	(5.87)	(24.94)	(302)	(0.00)
11	14.48	33.50	5.88	302	10	14.49	33.50	5.88	24.95	302	0.03
31	14.43	33.52	5.75	299	20	14.44	33.52	5.77	24.97	300	0.06
51	13.11	33.48	4.67	276	30	14.43	33.52	5.77	24.97	300	0.09
76	11.92	33.66	3.90	241	50	13.15	33.48	4.71	25.21	277	0.15
102	10.84	33.71	3.31	219	75	11.98	33.66	3.93	25.57	242	0.21
127	10.4 a)	33.79	2.91	206	100	10.88	33.70	3.37	25.81	220	0.27
167	9.33	34.02	2.21	171	150	9.77	33.94	2.49	26.18	184	0.38
207	8.67	34.08	1.80	157	200	8.78	34.07	1.87	26.45	159	0.46
ORCA; February 15, 1959; 0646 GCT; 33°52'N, 120°07.5'W; sounding, 100 fm; wind, 140°, force 3; weather, cloudy; sea, slight; wire angle, 03°.											83.51
0	14.56	33.51	5.76	302	0	14.56	33.51	5.76	24.94	302	0.00
10	14.50	33.57	5.72	297	10	14.50	33.57	5.72	25.00	297	0.03
30	14.14	33.53	5.72	292	20	14.37	33.56	5.72	25.02	295	0.06
50	12.34	33.53	4.75	258	30	14.14	33.53	5.72	25.04	292	0.09
75	10.92	33.60	4.00	228	50	12.34	33.53	4.75	25.40	258	0.14
100	10.2 a)	33.75	3.27	205	75	10.92	33.60	4.00	25.72	228	0.20
126	9.46	33.89	2.72	183	100	10.2	33.75	3.27	25.96	205	0.26
155	9.19	33.98	2.31	172	150	9.22	33.96	2.39	26.30	174	0.35

a) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

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5902

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
83.55	ORCA; February 15, 1959; 0907, 0939 GCT; 33°44'N, 120°24.5'W; sounding, 600 fm; wind, 140°, force 6; weather, cloudy; sea, moderate; wire angle, 12°, 19°.										
1	14.14	33.53	5.69	293	0	(14.14)	(33.53)	(5.69)	(25.04)	(293)	(0.00)
11	14.14	33.60	5.60	287	10	14.14	33.60	5.60	25.10	287	0.03
30	14.05	33.53	5.55	291	20	14.10	33.57	5.58	25.08	289	0.06
59	12.53	33.51	4.62	263	30	14.05	33.53	5.55	25.06	291	0.09
69	11.81	33.55	4.47	247	50	13.50	33.52	5.18	25.17	281	0.14
83	10.95	33.58	4.08	230	75	11.42	33.56	4.28	25.60	240	0.21
97	10.29	33.68	3.76	212	100	10.20	33.68	3.70	25.91	210	0.27
112	9.62	33.71	3.18	199	150	8.76	33.94	2.43	26.36	168	0.36
136	8.94	33.89	2.75	175	200	8.43	34.08	1.81	26.51	153	0.44
155	8.72	33.96	2.34	166	250	8.06	34.12	1.64	26.60	144	0.52
184	8.60	34.07	1.83	156	300	7.65	34.16	1.25	26.69	136	0.59
212	8.32	34.09	1.80	151	400	7.12	34.22	0.82	26.81	125	0.72
					500	6.54	34.26	0.60	26.93	114	0.85
239	8.15	34.11	1.72	147	600	(5.75)	(34.35)		(27.09)	(98)	(0.96)
287	7.73	34.16	1.30	137							
339	7.44	34.16	1.14	134							
420	7.0 a)	34.23	0.77	123							
503	6.52	34.27	0.58	113							
587	5.88	34.34	0.50	100							
83.60	ORCA; February 15, 1959; 1243 GCT;[b] 33°34'N, 120°45'W; sounding, 800 fm; wind, 140°, force 6; weather, overcast; sea, moderate; wire angle, 11°.										
1	14.16	33.41	5.68	301	0	(14.16)	(33.41)	(5.68)	(24.95)	(301)	(0.00)
11	14.16	33.39	5.80	303	10	14.16	33.39	5.80	24.93	303	0.03
21	14.18	33.38	5.76	304	20	14.18	33.38	5.76	24.92	304	0.06
30	14.17	33.37	5.84	304	30	14.17	33.37	5.84	24.92	304	0.09
40	14.14	33.39	5.80	302	50	14.12	33.39	5.83	24.94	302	0.15
50	14.12	33.39	5.83	302	75	13.50	33.41	5.53	25.09	288	0.22
59	14.01	33.40	5.82	300	100	11.12	33.48	4.50	25.60	240	0.29
69	13.84	33.42	5.75	294	150	8.99	33.84	3.32	26.24	179	0.40
79	12.96	33.39	5.21	280	200	(8.23)	(34.05)	(2.27)	(26.52)	(153)	(0.48)
89	12.38	33.43	4.91	266							
99	11.14	33.48	4.51	241							
108	10.22	33.52	4.16	223							
118	9.90	33.56	4.04	214							
129	9.51	33.68	3.94	199							
139	9.3 a)	33.74	3.51	191							
149	9.00	33.84	3.33	180							
173	8.70	33.91	2.59	170							
198	8.25	34.04	2.28	154							

a) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.
b) Test cast, upper.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

83.60

ORCA; February 15, 1959; 1335 GCT;[a] 33°34'N, 120°45'W; sounding, 800 fm; wind, 140°, force 6; weather, overcast; sea, moderate; wire angle, 20°.

93	11.68	33.44	4.76	253						
130	9.52	33.68	3.94	199						
139	9.28	33.71	3.65	194						
149	9.10	33.78	3.37	186						
158	8.91	33.86	2.98	176						
168	8.75	33.89	2.70	172						
177	8.66	33.94	2.46	167						
187	8.54	33.98	2.34	162	150	9.08	33.78	3.36	26.17	186
197	8.32	34.04	2.22	154	200	8.30	34.04	2.21	26.50	154
206	8.24	34.05	2.12	153	250	7.90	34.11	1.74	26.62	143
216	8.12	34.04	2.01	152						
225	8.06	34.05	1.95	150						
235	7.98	34.06	1.84	148						
245	8.0 b)	34.10	1.75	146						
254	7.78	34.13	1.63	140						
264	7.72	34.14	1.59	139						
274	7.64	34.14	1.55	138						
283	7.54	34.16	1.47	135						

83.60

ORCA; February 15, 1959; 1538 GCT; 33°34'N, 120°45'W; sounding, 800 fm; wind, 150°, force 7; weather, overcast; sea, rough; wire angle, 28°.

1	14.13	33.41	5.82	301	0	(14.13)	(33.41)	(5.82)	(24.96)	(301)	(0.00)
10	14.14	33.39	5.88	302	10	14.14	33.39	5.88	24.94	302	0.03
32	14.18	33.43	5.76	300	20	14.15	33.39	5.84	24.94	302	0.06
59	13.90	33.42	5.84	296	30	14.17	33.42	5.77	24.96	301	0.09
68	13.10	33.37	5.14	284	50	14.16	33.43	5.77	24.96	300	0.15
85	10.73	33.46	4.36	235	75	12.14	33.38	4.77	25.33	265	0.22
100	10.34	33.50	4.23	226	100	10.34	33.50	4.23	25.74	226	0.28
113	9.92	33.58	4.18	213	150	9.18	33.78	3.15	26.16	187	0.39
139	9.34	33.69	3.56	196	200	8.39	33.94	2.28	26.41	163	0.48
157	9.06	33.83	2.91	182	250	7.89	34.05	1.76	26.57	148	0.56
184	8.56	33.91	2.46	168	300	7.42	34.12	1.30	26.69	136	0.63
215	8.25	33.97	2.14	159	400	6.48	34.16	0.80	26.85	121	0.76
242	7.96	34.04	1.82	149	500	6.04	34.24	0.57	26.97	110	0.88
288	7.51	34.11	1.38	138	600	5.56	34.31	0.37	27.08	98	0.99
347	6.94	34.14	0.97	128						
441	6.2 b)	34.18	0.70	116						
527	5.96	34.26	0.50	107						
600	5.56	34.31	0.37	98						

a) Test cast, lower.

b) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
83.70	ORCA; February 18, 1959; 1732 GCT; 33°13'N, 121°30'W; sounding, 2000 fm; wind, 310°, force 2; weather, partly cloudy; sea, very rough; wire angle, 06°.										
1	14.70	33.46	5.74	309	0	(14.70)	(33.46)	(5.74)	(24.87)	(309)	(0.00)
11	14.66	33.46	5.66	308	10	14.67	33.46	5.66	24.88	308	0.03
31	14.52	33.48	5.75	304	20	14.59	33.47	5.71	24.90	306	0.06
56	14.38	33.46	5.72	302	30	14.53	33.48	5.75	24.93	304	0.09
66	14.28	33.46	5.64	300	50	14.42	33.47	5.73	24.94	303	0.15
77	13.72	33.44	5.46	290	75	14.00	33.45	5.54	25.01	296	0.23
92	12.51	33.44	4.95	268	100	12.10	33.46	4.82	25.39	259	0.30
106	11.38	33.51	4.60	242	150	9.03	33.74	3.61	26.15	188	0.41
131	9.36	33.64	4.02	200	200	8.33	33.97	2.64	26.44	160	0.50
151	9.02	33.75	3.57	187	250	7.69	34.04	2.12	26.59	146	0.57
175	8.58	33.89	3.01	169	300	7.23	34.06	1.66	26.67	138	0.65
205	8.28	33.99	2.59	158	400	6.39	34.18	0.90	26.88	118	0.78
234	7.86	34.04	2.31	148	500	5.77	34.20	0.60	26.98	109	0.90
275	7.46	34.04	1.81	142							
334	6.92	34.13	1.39	128							
407	6.34	34.18	0.86	118							
481	5.90	34.19	0.66	112							
558	5.30	34.26	0.47	99							
83.80	ORCA; February 18, 1959; 1152 GCT; 32°50'N, 122°10'W; sounding, 2000 fm; wind, 190°, force 2; weather, partly cloudy; sea, rough; wire angle, 01°.										
1	14.75	33.51	5.76	306	0	(14.75)	(33.51)	(5.76)	(24.90)	(306)	(0.00)
11	14.75	33.49	5.74	307	10	14.75	33.49	5.74	24.89	307	0.03
31	14.62	33.49	5.74	305	20	14.71	33.49	5.74	24.90	306	0.06
56	13.70	33.49	5.18	287	30	14.62	33.49	5.74	24.91	305	0.09
66	11.37	33.44	4.35	248	50	14.62	33.49	5.74	24.91	305	0.15
77	10.72	33.49	4.32	232	75	10.80	33.48	4.32	25.65	235	0.22
92	10.25	33.57	3.95	219	100	9.97	33.65	3.79	25.93	208	0.28
107	9.74	33.72	3.65	200	150	8.85	33.89	2.72	26.29	174	0.37
132	9.12	33.82	2.89	183	200	7.98	33.98	2.58	26.50	154	0.46
151	8.84	33.89	2.72	174	250	7.41	34.04	1.99	26.63	142	0.53
177	8.28	33.93	2.72	162	300	7.02	34.06	1.68	26.70	136	0.60
207	7.90	34.00	2.47	152	400	6.40	34.21	0.92	26.90	116	0.73
237	7.52	34.04	2.07	144	500	5.76	34.28	0.30	27.04	103	0.85
277	7.24	34.05	1.83	139							
337	6.68	34.10	1.34	128							
413	6.35	34.23	0.83	114							
488	5.84	34.27	0.30	105							
568	5.49	34.33	0.33	96							
83.90	ORCA; February 18, 1959; 0653 GCT; 32°32'N, 122°48.5'W; sounding, 2400 fm; wind, 210°, force 2; weather, partly cloudy; sea, very rough; wire angle, 01°.										
1	14.78	33.48	5.77	309	0	(14.78)	(33.48)	(5.77)	(24.87)	(309)	(0.00)
11	14.77	33.46	5.62	310	10	14.77	33.46	5.62	24.86	310	0.03
31	14.66	33.48	5.74	306	20	14.71	33.48	5.69	24.88	308	0.06
56	14.62	33.47	5.68	306	30	14.67	33.48	5.73	24.90	306	0.09
66	14.16	33.46	5.56	298	50	14.63	33.48	5.70	24.90	306	0.15
76	11.35	33.51	4.27	242	75	11.46	33.50	4.32	25.55	245	0.22
91	10.43	33.58	3.79	221	100	10.00	33.63	3.62	25.90	211	0.28
107	9.66	33.68	3.48	202	150	8.87	33.83	2.81	26.24	178	0.38
132	9.02	33.80	3.12	183	200	8.14	34.02	2.07	26.51	153	0.46
152	8.84	33.84	2.78	177	250	7.50	34.12	1.50	26.68	138	0.54
176	8.41	33.93	2.59	164	300	6.90	34.11	1.26	26.76	130	0.60
206	8.07	34.04	1.98	151	400	6.08	34.17	0.74	26.91	115	0.73
236	7.69	34.11	1.60	141	500	5.67	34.26	0.44	27.04	103	0.84
276	7.19	34.12	1.35	133							
336	6.50	34.10	1.11	126							
410	6.02	34.18	0.68	114							
485	5.72	34.25	0.45	105							
565	5.44	34.31	0.35	97							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T}^{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T}^{-5} 10^3 cm/g	ΔD dyn. m
ORCA; February 19, 1959; 1102 GCT; 33°50'N, 118°37.5'W; sounding, 156 fm; wind, 240°, force 4; weather, partly cloudy; sea, moderate; wire angle, 05°.											87.35
0	15.35	33.54	5.72	316	0	15.35	33.54	5.72	24.80	316	0.00
12	15.36	33.55	5.77	316	10	15.35	33.55	5.77	24.80	316	0.03
32	15.27	33.55	5.64	314	20	15.32	33.55	5.71	24.81	315	0.06
52	15.04	33.43u	5.66		30	15.28	33.55	5.65	24.82	314	0.09
77	12.82	33.64	4.13	258	50	15.06	33.44	5.66	24.78	318	0.16
102	11.60	33.68	3.63	234	75	12.98	33.63	4.23	25.36	263	0.23
					100	11.78	33.68	3.69	25.62	237	0.29
ORCA; February 19, 1959; 0747 GCT; 33°39'N, 118°58.5'W; sounding, 350 fm; wind, 270°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.											87.40
1	15.33	33.57a)	5.75	314	0	(15.33)	(33.57)	(5.75)	(24.82)	(314)	(0.00)
11	15.31	33.57	5.74	313	10	15.32	33.57	5.74	24.83	313	0.03
31	15.13	33.55	5.65	311	20	15.29	33.57	5.72	24.83	313	0.06
55	14.15	33.51	5.02	294	30	15.15	33.55	5.67	24.85	311	0.09
65	13.10	33.53	4.82	272	50	14.90	33.54	5.52	24.88	308	0.16
75	12.16	33.60	4.03	250	75	12.16	33.60	4.03	25.50	250	0.22
89	11.39	33.60	3.93	236	100	11.12	33.68	3.61	25.74	226	0.29
104	11.04	33.72	3.49	222	150	9.89	33.87	2.69	26.11	191	0.39
129	10.30	33.84	3.01	200	200	9.02	34.02	2.10	26.36	167	0.48
149	9.90	33.87	2.70	191	250	8.48	34.10	1.78	26.52	152	0.56
174	9.54	34.01	2.34	176	300	7.94	34.16	1.43	26.64	140	0.64
203	8.96	34.02	2.02	166	400	7.10	34.28	0.80	26.86	120	0.77
233	8.61	34.08	1.84	156	500	6.35	34.34	0.50	27.01	106	0.89
273	8.25	34.14	1.68	146							
333	7.57	34.17	1.18	134							
407	7.04	34.29	0.76	118							
482	6.48	34.33	0.52	108							
560	5.99	34.36	0.39	100							
ORCA; February 16, 1959; 2218, 2257 GCT; 33°33.5'N, 119°13.5'W; sounding, 900 fm; wind, 160°, force 4; weather, cloudy; sea, very rough; wire angle, 05, 01°.											87.45
4	14.66	33.48	5.65	306	0	14.7	(33.48)	(5.65)	(24.88)	(308)	(0.00)
14	14.52	33.48	5.64	304	10	14.59	33.48	5.64	24.91	305	0.03
34	14.30	33.51	5.59	297	20	14.47	33.48	5.64	24.94	302	0.06
44	13.58	33.49	5.14	284	30	14.35	33.50	5.62	24.98	299	0.09
59	12.06	33.51	4.40	254	50	12.93	33.49	4.80	25.26	272	0.15
					75	10.83	33.60	3.81	25.74	227	0.21
73	10.92	33.59	3.86	229	100	10.19	33.68	3.34	25.92	210	0.27
98	10.20	33.68	3.35	210	150	9.32	33.82	2.84	26.16	186	0.37
118	9.90	33.73	3.17	202	200	8.92	34.04	2.12	26.40	164	0.45
138	9.51	33.78	3.03	192	250	8.36	34.13	1.78	26.56	148	0.53
158	9.21	33.86	2.66	182	300	7.93	34.18	1.40	26.66	139	0.61
188	9.05	34.00	2.25	168	400	7.12	34.24	0.77	26.83	123	0.74
224	8.54	34.08	1.90	155	500	6.44	34.30	0.47	26.96	110	0.86
254	8.32	34.14	1.72	147	600	5.90	34.35	0.39	27.07	100	0.98
304	7.89	34.18	1.37	138							
359	7.41	34.21	0.92	130							
444	6.8 b)	34.29	0.63	115							
529	6.26	34.31	0.40	107							
614	5.86	34.36	0.39	98							

a) Salinity bottle numbers were not recorded on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be in the order listed.

b) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
87.55	ORCA; February 17, 1959; 0517 GCT; 33°10'N, 120°02'W; sounding, 600 fm; wind, 150°, force 3; weather, partly cloudy; sea, very rough; wire angle, 00°.										
1	15.28	33.56	5.64	314	0	(15.28)	(33.56)	(5.64)	(24.82)	(314)	(0.00)
11	15.27	33.55	5.59	314	10	15.27	33.55	5.59	24.82	314	0.03
31	14.92	33.48	5.59	312	20	15.03	33.50	5.59	24.83	313	0.06
56	14.70	33.49	5.60	306	30	14.93	33.48	5.59	24.84	312	0.09
67	13.18	33.44	4.96	280	50	14.79	33.49	5.60	24.88	308	0.16
77	11.84	33.49	4.52	252	75	12.92	33.49	4.55	25.45	254	0.23
91	10.97	33.49	4.23	237	100	10.38	33.55	4.06	25.78	223	0.29
107	10.34	33.55	4.03	222	150	9.38	33.77	3.17	26.11	191	0.39
131	9.67	33.69	3.47	201	200	8.32	33.97	2.33	26.44	160	0.48
152	9.33	33.78	3.12	189	250	7.81	34.07	1.79	26.59	145	0.56
176	8.72	33.93	2.57	169	300	7.32	34.10	1.48	26.69	136	0.63
207	8.22	33.98	2.26	158	400	6.76	34.20	0.78	26.84	122	0.76
237	7.91	34.03	1.89	150	500	6.21	34.27	0.44	26.98	109	0.88
277	7.54	34.10	1.66	139							
337	7.05	34.09	1.22	134							
412	6.7 a)	34.22	0.73	119							
488	6.26	34.27	0.47	110							
568	5.81	34.28	0.37	104							
87.60	ORCA; February 9, 1959; 0510 GCT; 32°58'N, 120°19'W; sounding, 400 fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 20°.										
1	15.12	33.59		308	0	(15.12)	(33.59)		(24.88)	(308)	(0.00)
10	15.13	33.57		309	10	15.13	33.57		24.87	309	0.03
29	14.58	33.54		300	20	14.96	33.56		24.89	307	0.06
57	13.41	-			30	14.56	33.54		24.97	300	0.09
66	12.20	33.57		252	50	13.78	33.55		25.14	284	0.15
80	11.01	33.60		230	75	11.30	33.59		25.65	235	0.22
95	10.44	33.64		216	100	10.35	33.66		25.87	214	0.27
108	10.20	33.71		208	150	9.42	33.92		26.22	180	0.37
131	9.78	33.86		190	200	8.40	34.04		26.48	156	0.46
147	9.49	33.91		182	250	7.75	34.14		26.66	140	0.53
175	8.74	34.01		163	300	7.29	34.17		26.75	130	0.60
202	8.38	34.04		155	400	6.56	34.27		26.94	113	0.73
229	8.07	34.13		144	500	5.87	34.32		27.06	101	0.84
273	7.44	34.14		135							
324	7.14	34.20		126							
400	6.56	34.27		113							
481	5.98	34.32		102							
563	5.49	34.34		96							
87.60	ORCA; February 17, 1959; 0848 GCT; 33°01'N, 120°24'W; sounding, 400 fm; wind, 200°, force 3; weather, partly cloudy; sea, very rough; wire angle, 01°.										
2	15.00	33.57	5.64	307	0	(15.00)	(33.57)	(5.64)	(24.89)	(307)	(0.00)
12	14.99	33.50	5.67	312	10	15.00	33.50	5.67	24.84	312	0.03
32	14.85	33.49	5.65	310	20	14.94	33.50	5.66	24.85	311	0.06
57	14.78	33.49	5.48	308	30	14.86	33.49	5.65	24.86	310	0.09
68	13.05	33.48	4.66	275	50	14.82	33.49	5.62	24.87	309	0.16
78	12.08	33.49	4.36	256	75	12.38	33.49	4.44	25.36	262	0.23
93	10.42	33.59	3.86	220	100	10.10	33.58	3.87	25.85	216	0.29
108	9.95	33.58	3.88	213	150	9.12	33.84	2.95	26.21	182	0.39
133	9.46	33.99r	3.01		200	8.33	33.98	2.31	26.44	160	0.48
153	9.04	33.86	2.90	179	250	7.83	34.04	1.90	26.57	147	0.56
178	8.46	33.97	2.48	162	300	7.42	34.10	1.59	26.67	138	0.63
208	8.28	33.98	2.27	158	400	6.56	34.20	0.81	26.88	119	0.76
238	7.92	34.03	2.00	150	500	5.98	34.28	0.45	27.01	106	0.88
278	7.64	34.07	1.71	143							
339	7.01	34.15	1.42	128							
413	6.48	34.21	0.71	117							
489	6.03	34.28	0.45	107							
569	5.64	34.29	0.50	102							

a) Both protected reversing thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
ORCA; February 9, 1959; 0136 GCT; 32°45'N, 120°43.5'W; sounding, 2100 fm; wind, 320°, force 6; weather, partly cloudy; sea, rough; wire angle, 25°.											87.70
1	14.18	33.48		297	0	(14.18)	(33.48)		(25.00)	(297)	(0.00)
9	14.17	33.49		295	10	14.16	33.49		25.02	295	0.03
29	14.13	33.51		293	20	14.14	33.50		25.03	294	0.06
56	14.00	33.62		283	30	14.12	33.51		25.04	293	0.09
65	13.34	33.51		278	50	14.05	33.60		25.11	286	0.15
78	12.27	33.53		257	75	12.58	33.52		25.35	264	0.22
92	11.06	33.64		228	100	10.63	33.67		25.82	218	0.28
105	10.43	33.69		213	150	8.97	33.86		26.26	177	0.38
127	9.64	33.81		192	200	8.27	34.04		26.50	154	0.46
144	9.11	33.84		181	250	7.75	34.13		26.66	139	0.53
170	8.60	33.98		163	300	7.02	34.18		26.79	127	0.60
194	8.36	34.02		156	400	6.22	34.23		26.94	112	0.73
218	8.06	34.11		146	500	5.89	34.31		27.04	102	0.84
259	7.64	34.14		138							
303	6.98	34.18		126							
372	6.38	34.22		115							
446	6.01	34.25		109							
522	5.85	34.34		100							
ORCA; February 17, 1959; 1426 GCT; 32°43'N, 121°07.5'W; sounding, 2000 fm; wind, 220°, force 3; weather, cloudy; sea, very rough; wire angle, 00°.											87.70
1	14.92	33.56	5.75	306	0	(14.92)	(33.56)	(5.75)	(24.90)	(306)	(0.00)
11	14.90	33.57	5.72	305	10	14.91	33.57	5.72	24.91	305	0.03
31	14.86	33.53	5.72	307	20	14.88	33.56	5.72	24.91	305	0.06
56	14.67	33.55	5.73	302	30	14.86	33.53	5.72	24.89	307	0.09
66	13.78	33.50	5.15	288	50	14.74	33.54	5.73	24.92	304	0.15
76	12.28	33.48	4.73	261	75	12.45	33.48	4.77	25.34	264	0.22
91	11.23	33.52	4.27	239	100	10.89	33.59	3.91	25.72	228	0.29
106	10.72	33.62	3.78	223	150	8.91	33.82	2.93	26.24	179	0.39
131	9.28	33.73	3.64	192	200	8.33	34.02	2.21	26.48	156	0.47
152	8.87	33.84	2.82	178	250	7.66	34.08	1.77	26.62	143	0.55
177	8.60	33.96	2.42	165	300	7.21	34.15	1.33	26.74	132	0.62
207	8.24	34.03	2.16	154	400	6.51	34.21	0.77	26.89	117	0.75
237	7.79	34.05	1.90	146	500	5.99	34.28	0.43	27.01	106	0.86
277	7.46	34.13	1.55	136							
337	6.86	34.17	0.97	125							
412	6.45	34.22	0.72	116							
487	6.06	34.27	0.48	108							
567	5.74	34.32	0.39	100							
ORCA; February 8, 1959; 1917 GCT; 32°23'N, 121°30'W; sounding, 2100 fm; wind, 330°, force 6; weather, cloudy; sea, rough; wire angle, 08°.											87.80
0	15.1	33.42		320	0	15.1	33.42		24.76	320	0.00
10	15.13	33.42		321	10	15.13	33.42		24.75	321	0.03
31	15.16	33.42		321	20	15.14	33.42		24.75	321	0.06
60	14.97	33.48		313	30	15.15	33.42		24.75	321	0.10
69	13.02	33.40		281	50	15.12	33.43		24.76	320	0.16
85	11.70	33.48		250	75	12.48	33.43		25.30	268	0.23
100	10.66	33.53		229	100	10.66	33.53		25.71	229	0.30
115	9.83	33.57		213	150	9.12	33.82		26.20	183	0.40
138	9.28	33.75		191	200	8.31	34.03		26.49	156	0.49
159	9.01	33.86		178	250	7.60	34.13		26.67	138	0.56
189	8.47	34.00		160	300	7.00	34.13		26.76	130	0.63
218	8.06	34.06		150	400	6.19	34.23		26.94	112	0.76
249	7.62	34.13		138	500	5.86	34.31		27.05	102	0.87
298	7.03	34.13		130	600	5.26	34.35		27.15	93	0.97
352	6.40	34.16		120							
437	6.10	34.27		108							
521	5.76	34.32		100							
605	5.22	34.35		92							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

87.80 ORCA; February 17, 1959; 1924 GCT; 32°29.5'N, 121°41'W; sounding, 2000 fm; wind, 100°, force 3; weather, overcast; sea, very rough; wire angle, 08°.

1	14.94	33.48	5.77	312	0	(14.94)	(33.48)	(5.77)	(24.84)	(312)	(0.00)
11	14.84	33.40	5.47	316	10	14.85	33.40	5.50	24.80	316	0.03
31	14.76	33.46	5.46	310	20	14.79	33.44	5.46	24.84	312	0.06
56	14.73	33.46	5.63	309	30	14.76	33.46	5.46	24.86	310	0.09
66	14.52	33.44	5.57	306	50	14.74	33.46	5.60	24.86	310	0.16
76	12.62	33.39	4.92	274	75	12.80	33.39	4.99	25.21	277	0.23
91	11.44	33.44	4.52	249	100	10.70	33.43	4.42	25.63	236	0.30
106	10.38	33.43	4.35	231	150	9.04	33.80	2.91	26.19	184	0.40
130	9.60	33.64	3.49	204	200	8.28	33.94	2.38	26.43	161	0.49
150	9.04	33.80	2.91	184	250	7.60	34.04	1.87	26.60	144	0.57
175	8.64	33.91	2.61	169	300	7.10	34.08	1.42	26.70	135	0.64
205	8.20	33.95	2.31	160	400	6.36	34.15	0.88	26.86	120	0.77
234	7.80	34.02	2.04	149	500	5.64	(34.19)	(0.56)	(26.98)	(108)	(0.89)
273	7.32	34.07	1.63	138							
333	6.88	34.09	1.14	131							
406	6.31	34.16	0.85	119							
481	5.74	34.19	0.60	110							
559	5.48	-	-								

87.90 ORCA; February 8, 1959; 1344 GCT; 32°01'N, 122°19'W; sounding, 2300 fm; wind, 360°, force 4; weather, drizzle; sea, moderate; wire angle, 18°.

1	14.80	33.54		305	0	(14.80)	(33.54)		(24.91)	(305)	(0.00)
11	14.81	33.55		304	10	14.81	33.55		24.92	304	0.03
29	14.80	33.55		304	20	14.80	33.55		24.92	304	0.06
53	14.81	33.53		306	30	14.80	33.55		24.92	304	0.09
63	14.81	33.55		304	50	14.81	33.53		24.90	306	0.15
73	14.52	33.52		301	75	14.14	33.50		25.03	294	0.23
86	11.78	33.48		252	100	10.40	33.51		25.74	226	0.29
100	10.40	33.51		226	150	9.13	33.82		26.20	183	0.40
123	9.58	33.69		200	200	8.39	34.02		26.47	157	0.48
142	9.28	33.77		189	250	7.61	34.08		26.63	142	0.56
164	8.88	33.91		173	300	7.05	34.14		26.76	130	0.63
191	8.55	33.99		162	400	6.26	34.20		26.91	115	0.76
216	8.12	34.05		151	500	5.60	34.31		27.08	99	0.87
254	7.54	34.09		140							
310	6.96	34.15		128							
381	6.39	34.18		118							
452	5.94	34.29		105							
531	5.36	34.31		96							

87.90 ORCA; February 18, 1959; 0124 GCT; 32°04.5'N, 122°18.5'W; sounding, 2000 fm; wind, 220°, force 2; weather, partly cloudy; sea, very rough; wire angle, 03°.

0	15.19	33.46	5.63	319	0	15.19	33.46	5.63	24.77	319	0.00
10	14.94	33.45	5.65	315	10	14.94	33.45	5.65	24.81	315	0.03
30	14.84	33.46	5.70	312	20	14.87	33.45	5.67	24.83	313	0.06
55	14.80	33.46	5.74	310	30	14.84	33.46	5.70	24.84	312	0.09
65	14.78	33.48	5.58	309	50	14.81	33.46	5.73	24.85	311	0.16
75	13.68	33.40	5.31	293	75	13.68	33.40	5.31	25.04	293	0.23
91	11.28	33.42	4.42	248	100	10.48	33.54	4.03	25.76	225	0.30
106	10.12	33.63	3.86	213	150	9.06	33.74	3.88	26.14	188	0.40
130	9.50	33.66	3.66	201	200	8.31	33.94	2.86	26.42	162	0.49
150	9.06	33.74	3.88	188	250	7.59	34.05	1.99	26.61	144	0.57
176	8.59	33.89	3.05	170	300	7.16	34.06	1.39	26.68	137	0.64
206	8.23	33.96	2.79	160	400	6.52	34.14	0.78	26.83	123	0.78
236	7.76	34.05	2.15	146	500	5.57	34.26	0.43	27.04	103	0.89
276	7.38	34.05	1.63	140							
336	6.84	34.10	1.09	130							
411	6.46	34.14	0.73	122							
486	5.64	34.24	0.46	105							
565	5.34	34.33	0.31	94							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; February 28, 1959; 0901 GCT; 33°28.5'N, 117°47'W; sounding, 300 fm; wind, calm; weather, clear; sea, slight; wire angle, 01°.											90.28
0	15.68	33.50	5.74	326	0	15.68	33.50	5.74	24.68	326	0.00
10	15.36	33.49	5.82	320	10	15.36	33.49	5.82	24.76	320	0.03
30	15.06	33.50	5.74	314	20	15.21	33.49	5.78	24.79	317	0.06
50	12.44	33.60	3.98	256	30	15.06	33.50	5.74	24.82	314	0.10
75	11.44	33.69	3.40	230	50	12.44	33.60	3.98	25.44	256	0.15
100	10.61	33.78	3.19	210	75	11.44	33.69	3.40	25.70	230	0.21
125	9.88	33.93	2.53	187	100	10.61	33.78	3.19	25.92	210	0.27
166	9.47	34.11	1.94	167	150	9.55	34.04	2.15	26.30	173	0.36
206	9.63	34.20	1.48	163	200	9.60	34.19	1.50	26.41	163	0.45
ORCA; February 28, 1959; 0646 GCT; 33°23.5'N, 117°55'W; sounding, 320 fm; wind, direction missing, force 1; weather, clear; sea, slight; wire angle, 00°.											90.30
2	15.74	33.55	5.57	324	0	(15.74)	(33.55)	(5.57)	(24.71)	(324)	(0.00)
12	15.30	33.55	5.65	315	10	15.34	33.55	5.65	24.80	316	0.03
22	15.12	33.53	5.34	313	20	15.15	33.53	5.36	24.83	313	0.06
32	15.02	33.55	4.93	309	30	15.05	33.55	4.99	24.86	310	0.09
42	13.92	33.55	4.36	287	50	12.90	33.58	3.95	25.34	265	0.15
52	12.84	33.58	3.94	264	75	11.97	33.63	3.50	25.56	244	0.22
62	12.62	33.58	3.90	260	100	10.89	33.74	3.14	25.83	217	0.27
77	11.85	33.64	3.46	242	150	9.83	33.93	2.56	26.16	186	0.38
92	11.24	33.74	3.16	224	200	9.23	34.13	1.81	26.42	162	0.46
108	10.54	33.74	3.12	211	250	9.02	34.24	1.23	26.54	150	0.54
132	9.88	33.83	3.00	194	300	8.43	34.27	1.05	26.66	140	0.62
162	9.80	33.99	2.24	181	400	7.51	34.28	0.70	26.80	126	0.76
197	9.24	34.12	1.84	163	500	6.49	34.27	0.56	26.94	113	0.88
247	9.03	34.24	1.27	151							
297	8.46	34.27	1.07	140							
353	8.10	34.30	0.76	132							
428	7.17	34.27	0.69	122							
503	6.46	34.27	0.54	112							
ORCA; February 28, 1959; 0438 GCT; 33°19.5'N, 118°04'W; sounding, 814 fm; wind, 270°, force 1; weather, clear; sea, slight; wire angle, 02°.											90.32
1	15.58	33.53	5.59	322	0	(15.58)	(33.53)	(5.59)	(24.74)	(322)	(0.00)
11	15.35	33.53	5.57	317	10	15.37	33.53	5.58	24.79	317	0.03
31	14.93	33.54	5.42	308	20	15.21	33.53	5.52	24.82	314	0.06
41	13.89	33.58	4.51	284	30	15.00	33.54	5.44	24.88	308	0.09
52	12.79	33.59	4.09	262	50	12.90	33.58	4.11	25.34	264	0.15
67	11.61	33.68	3.57	234	75	11.27	33.68	3.51	25.72	228	0.21
81	11.09	33.68	3.45	225	100	10.77	33.74	3.02	25.86	214	0.27
101	10.76	33.75	3.01	214	150	10.03	33.94	2.42	26.14	188	0.37
126	10.33	33.82	2.71	202	200	9.65	34.16	1.63	26.38	166	0.46
151	10.02	33.95	2.40	188	250	8.81	34.24	1.46	26.57	147	0.54
176	9.62	34.07	2.01	172	300	8.34	34.26	1.10	26.66	139	0.62
201	9.64	34.16	1.61	166	400	7.44	34.29	0.70	26.82	124	0.75
256	8.72	34.24	1.42	146	500	6.46	34.29	0.52	26.96	110	0.87
306	8.30	34.26	1.04	138							
357	7.86	34.29	0.73	130							
406	7.39	34.29	0.70	123							
511	6.38	34.29	0.50	110							
561	6.06	34.31	0.39	105							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

90.37 ORCA; February 28, 1959; 0142 GCT; 33°10.5'N, 118°23.5'W; sounding, 647 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 07°.

1	15.66	33.58	5.53	320	0	(15.66)	(33.58)	(5.53)	(24.76)	(320)	(0.00)
10	15.28	33.58	5.69	312	10	15.28	33.58	5.69	24.84	312	0.03
30	15.22	33.58	5.69	311	20	15.24	33.58	5.69	24.84	312	0.06
50	14.93	33.64	5.34	300	30	15.22	33.58	5.69	24.85	311	0.09
65	14.02	33.64	4.68	282	50	14.93	33.64	5.34	24.96	300	0.16
80	12.39	33.71	3.93	246	75	12.60	33.70	4.01	25.49	250	0.22
100	11.40	33.69	3.74	230	100	11.40	33.69	3.74	25.70	230	0.28
115	10.70	33.73	3.36	215	150	9.83	33.89	2.70	26.13	189	0.39
130	10.40	33.80	2.95	204	200	9.48	34.06	2.25	26.32	171	0.48
150	9.83	33.89	2.70	189	250	9.13	34.21	1.50	26.50	154	0.57
180	9.27	33.95	2.52	176	300	8.26	34.22	1.28	26.65	140	0.64
205	9.51	34.07	2.17	170	400	7.02	34.20	0.80	26.81	125	0.78
255	9.04	34.22	1.45	152	500	6.28	34.28	0.47	26.98	109	0.90
310	8.09	34.22	1.24	138							
359	7.33	34.18	0.98	131							
410	6.96	34.21	0.76	123							
514	6.15	34.29	0.43	107							
564	5.88	34.33	0.31	101							

90.45 ORCA; February 27, 1959; 1837 GCT;[a] 32°55.5'N, 118°58'W;[b] sounding, 920 fm; wind, 270°, force 1; weather, cloudy; sea, rough; wire angle, 05°.

1	15.58	33.55	5.36	320	0	(15.58)	(33.55)	(5.36)	(24.75)	(320)	(0.00)
11	15.39	33.55	5.60	316	10	15.40	33.55	5.57	24.79	316	0.03
32	15.37	33.55	5.39	316	20	15.39	33.55	5.50	24.79	316	0.06
42	14.99	33.55	5.30	308	30	15.38	33.55	5.40	24.79	316	0.10
52	14.25	33.56	4.85	292	50	14.38	33.56	4.91	25.03	294	0.16
67	13.02	33.53	4.36	271	75	12.45	33.56	4.10	25.40	258	0.22
81	12.10	33.59	3.92	249	100	11.00	33.68	3.50	25.76	224	0.29
101	10.98	33.68	3.49	223	150	9.49	33.84	2.99	26.15	187	0.39
127	10.14	33.77	3.14	203	200	9.10	34.09	2.10	26.41	163	0.48
151	9.48	33.84	2.98	187	250	8.40	34.16	1.69	26.58	146	0.56
176	9.32	34.06	2.19	168	300	7.71	34.24	1.23	26.75	131	0.63
201	9.09	34.09	2.09	163	400	7.01	34.26	0.71	26.86	120	0.76
256	8.31	34.17	1.63	145	500	6.34	34.33	0.48	27.00	106	0.88
306	7.65	34.25	1.21	130							
356	7.22	34.24	1.00	125							
405	6.98c)	34.26	0.71	120							
510	6.26	34.34	0.46	104							
561	5.92	34.36	0.35	99							

a) Test cast, top.
b) Ship drifted two miles while on station.
c) Mean value of 6.95 and 7.01°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
ORCA; February 27, 1959; 2104 GCT;[a] 32°53.5'N, 118°56'W;[b] sounding, 920 fm; wind, 270°, force 1; weather, cloudy; sea, rough; wire angle, 06°.											90.45
404	6.96	34.27	0.73	119							
454	6.62	34.34	0.53	109							
504	6.37	34.33	0.43	106							
554	5.94	34.39	0.38	97							
604	5.69	34.37	0.24	96							
654	5.48	34.41	0.34	90							
705	5.16	34.45	0.34	84							
754	4.97	34.44	0.27	82							
804	4.83	34.49	0.32	78							
854	4.56	34.50	0.48	74							
904	4.42	34.52	0.41	71							
954	4.29	34.51	0.44	70							
1004	4.14	34.53	0.52	67	500	6.39	34.33	0.45	27.00	106	
1054	4.05	34.52	0.63	67	600	5.71	34.37	0.25	27.12	96	
1105	4.02	34.54	0.56	65	700	5.20	34.45	0.34	27.24	84	
1155	3.92	34.54	0.61	64	800	4.85	34.49	0.31	27.30	78	
1205	3.88	34.54	0.70	64	1000	4.15	34.53	0.51	27.42	68	
1255	3.84	34.56	0.56	62	1200	3.89	34.54	0.69	27.45	64	
ORCA; February 27, 1959; 1941 GCT;[c] 32°54.5'N, 118°57'W;[b] sounding, 920 fm; wind, 270°, force 1; weather, cloudy; sea, rough; wire angle, 09°.											90.45
964	4.26	34.49	0.43	71							
1014	4.12	34.50	0.48	69							
1038	4.10	34.52	0.53	67							
1063	4.08	34.49	0.50	69							
1088	4.04	34.51	0.48	68							
1113	4.00	34.51	0.49	68							
1139	3.98	34.52	0.52	66							
1164	3.94	34.52	0.50	66							
1188	3.93	34.52	0.50	66							
1213	3.84	34.53	0.56	64							
1238	3.86	34.53	0.54	64							
1263	3.82	34.52	0.49	64							
1288	3.80	34.52	0.56	64							
1314	3.82	34.54	0.59	64							
1338	3.80	34.54	0.56	63							
1388	3.76	34.55	0.57	62							
1438	3.75	34.56	0.50	60	1000	4.16	34.50	0.47	27.40	69	
1513	3.72	34.56	0.60	60	1200	3.89	34.53	0.53	27.44	65	
					1500	3.73	34.56	0.58	27.48	61	
ORCA; February 27, 1959; 1520 GCT; 32°47.5'N, 119°18'W; sounding, missing; wind, 280°, force 2; weather, cloudy; sea, rough; wire angle, missing.											90.50
2	15.24	33.55	5.62	313	0	(15.24)	(33.55)	(5.62)	(24.83)	(313)	(0.00)
12	15.24	33.56	5.64	313	10	15.24	33.56	5.64	24.83	313	0.03
32	15.16	33.55	5.70	312	20	15.24	33.56	5.67	24.83	313	0.06
52	14.22	33.52	5.39	295	30	15.18	33.56	5.69	24.84	312	0.09
					50	14.30	33.52	5.42	25.01	296	0.15
ORCA; February 27, 1959; 1056 GCT; 32°29'N, 119°39.5'W; sounding, missing; wind, 280°, force 2; weather, cloudy; sea, rough; wire angle, 05°.											90.55
1	15.69	33.57	5.39	322	0	(15.69)	(33.57)	(5.39)	(24.74)	(322)	(0.00)
11	15.71	33.56	5.46	322	10	15.71	33.56	5.46	24.74	322	0.03
31	15.71	33.55	5.33	323	20	15.71	33.56	5.45	24.73	323	0.06
51	15.70	33.56	5.26	322	30	15.71	33.55	5.33	24.72	323	0.10
75	14.04	33.52	4.91	292	50	15.70	33.56	5.26	24.73	322	0.16
100	12.82	33.55	4.47	266	75	14.04	33.52	4.91	25.05	292	0.24
125	11.15	33.64	3.94	229	100	12.82	33.55	4.47	25.32	266	0.31
165	9.65	33.85	3.00	189	150	10.08	33.77	3.36	25.99	202	0.43
205	9.00	34.00	2.41	168	200	9.07	33.98	2.47	26.33	170	0.52

a) Test cast, middle.
b) Ship drifted two miles while on station.
c) Test cast, bottom.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

90.60 ORCA; February 7, 1959; 1505 GCT; 32°28.5'N, 119°56'W; sounding, 485 fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 01°.

0	15.16	33.64		305	0	15.16	33.64		24.91	305	0.00
10	15.17	33.64		305	10	15.17	33.64		24.91	305	0.03
30	15.18	33.60		308	20	15.18	33.61		24.89	307	0.06
55	12.15	33.52		256	30	15.18	33.60		24.88	308	0.09
65	10.60	33.57		225	50	15.21	33.61		24.87	309	0.15
75	10.16	33.63		213	75	10.16	33.63		25.88	213	0.22
90	9.68	33.69		201	100	9.44	33.74		26.08	194	0.27
106	9.35	33.77		190	150	8.72	33.96		26.36	167	0.36
131	9.12	33.84		181	200	8.02	34.05		26.55	150	0.44
151	8.71	33.96		166	250	7.50	34.12		26.68	137	0.52
176	8.34	34.02		156	300	6.83	34.18		26.82	124	0.58
206	7.94	34.06		148	400	6.30	34.37		27.04	103	0.70
236	7.68	34.11		141	500	5.92	34.34		27.06	100	0.81
276	7.11	34.15		130							
336	6.56	34.24		116							
411	6.27	34.37		103							
486	5.98	34.34		101							
566	5.72	34.36		96							

90.60 ORCA; February 27, 1959; 0755 GCT; 32°22.5'N, 119°58'W; sounding, 400 fm; wind, 270°, force 3; weather, clear; sea, very rough; wire angle, 07°.

1	15.88	33.56	5.47	326	0	(15.88)	(33.56)	(5.47)	(24.69)	(326)	(0.00)
11	15.88	33.58	5.49	325	10	15.88	33.58	5.49	24.70	325	0.03
30	15.82	33.57	5.60	324	20	15.86	33.57	5.59	24.71	324	0.06
50	15.60	33.55	4.67u	321	30	15.82	33.57	5.60	24.71	324	0.10
66	14.63	33.55	5.00	301	50	15.60	33.55		24.75	321	0.16
81	13.08	33.57	4.41	269	75	13.68	33.56	4.62	25.17	280	0.24
101	11.54	33.52	4.54	244	100	11.59	33.52	4.54	25.54	245	0.30
116	10.52	33.56	4.42	224	150	9.65	33.74	3.34	26.05	197	0.42
131	10.00	33.62	4.13	212	200	8.46	34.00	2.37	26.45	159	0.50
151	9.64	33.75	3.28	196	250	7.82	34.08	1.93	26.60	144	0.58
181	8.86	33.93	2.62	171	300	7.14	34.12	1.55	26.74	132	0.66
206	8.36	34.02	2.31	157	400	6.82	34.26	0.61	26.88	118	0.78
256	7.74	34.09	1.88	143	500	6.16	34.32	0.54	27.02	105	0.90
311	7.03	34.14	1.45	130							
360	7.04	34.24	-	122							
410	6.76	34.26	0.59	117							
516	6.04	34.33	0.52	103							
566	5.72	34.35	0.30	97							

90.70 ORCA; February 7, 1959; 2028 GCT; 32°10'N, 120°37.5'W; sounding, 2000 fm; wind, 230°, force 3; weather, rain; sea, rough; wire angle, 04°.

1	14.86	33.50		309	0	(14.86)	(33.50)		(24.87)	(309)	(0.00)
11	14.80	33.49		309	10	14.80	33.49		24.87	309	0.03
31	14.72	33.53		304	20	14.76	33.51		24.89	307	0.06
56	14.54	33.49		303	30	14.73	33.53		24.92	304	0.09
67	14.52	33.48		303	50	14.57	33.50		24.93	303	0.15
77	13.02	33.46		276	75	13.38	33.46		25.15	283	0.23
92	11.70	33.46		252	100	10.84	33.50		25.66	234	0.29
107	10.27	33.56		220	150	9.10	33.77		26.15	187	0.40
131	9.34	33.69		196	200	8.44	33.99		26.44	160	0.48
151	9.09	33.77		187	250	7.74	34.15		26.67	138	0.56
176	8.73	33.92		170	300	7.13	34.13		26.74	132	0.63
207	8.35a)	34.00		158	400	6.29	34.19		26.90	116	0.76
236	7.96	34.16		140	500	5.75	34.24		27.01	106	0.87
275	7.41	34.13		136							
335	6.80	34.14		126							
409	6.23	34.20		115							
483	5.83	34.23		108							
563	5.44	34.33		96							

a) Alternate value, 8.59°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

ORCA; February 27, 1959; 0242 GCT; 32°00'N, 120°36'W; sounding, 2140 fm; wind, 330°, force 3; weather, partly cloudy; sea, very rough; wire angle, 24°. 90.70

2	15.15	33.34	5.44	320	0	(15.15)	(33.34)	(5.44)	(24.76)	(320)	(0.00)
11	15.10	33.36	5.62	324	10	15.11	33.36	5.60	24.71	324	0.03
30	15.02	33.37	5.52	323	20	15.07	33.36	5.58	24.72	324	0.06
48	15.01	33.38	5.55	321	30	15.02	33.37	5.52	24.73	323	0.10
66	14.88	33.37	5.62	320	50	15.00	33.38	5.57	24.75	321	0.16
80	14.82	33.42	5.60	314	75	14.84	33.42	5.61	24.81	315	0.24
103	12.34	33.30	5.28	275	100	12.74	33.32	5.34	25.17	281	0.32
115	11.04	33.42	4.55	244	150	9.64	33.65	4.10	25.98	204	0.44
128	10.36	33.55	4.19	222	200	8.54	33.86	2.95	26.33	171	0.53
144	9.78	33.64	4.12	206	250	7.72	34.00	2.14	26.55	150	0.61
172	9.22	33.71	3.98	193	300	7.19	34.06	1.70	26.68	138	0.69
193	8.70	33.85	3.09	174	400	6.43	34.18	0.90	26.87	119	0.82
240	7.85	33.98	2.24	152	500	5.78	34.19	0.60	26.96	110	0.94
283	7.32	34.03	1.85	142							
331	6.96	34.10	1.42	132							
377	6.60	34.16	1.01	122							
475	5.85	34.18	0.63	112							
523	5.72	34.21	0.55	108							

ORCA; February 8, 1959; 0217, 0243 GCT; 31°44.5'N, 121°19.5'W; sounding, 3200 fm; wind, 240°, force 2; weather, cloudy; sea, moderate; wire angle, 03°, 04°. 90.80

0	16.42	33.78	5.23	322	0	16.42	33.78	5.23	24.74	322	0.00
11	16.46	33.76	5.39	324	10	16.46	33.76	5.39	24.71	324	0.03
31	16.46	33.75	5.35	325	20	16.46	33.75	5.37	24.71	324	0.06
56	16.51	33.75	5.41	326	30	16.46	33.75	5.35	24.70	325	0.10
66	16.46	33.78	5.13	323	50	16.50	33.75	5.40	24.69	326	0.16
76	16.48	33.75	5.12	326	75	16.48	33.75	5.12	24.69	326	0.24
91	16.49	33.74	5.35	326	100	16.48	33.74	5.37	24.69	326	0.33
106	15.76	33.68	5.39	315	150	9.82	33.67	4.46	24.97	205	0.46
131	12.41a)	33.61	4.85	254	200	8.58	33.91	2.90	26.36	168	0.56
					250	7.83	34.03	2.16	26.56	148	0.64
151	9.76	33.68	4.44	203	300	7.16	34.11	1.67	26.71	134	0.71
176	9.16	33.75	3.83	189	400	6.32	34.21	0.68	26.91	115	0.84
206	8.48	33.93	2.79	165	500	6.06	34.34	0.37	27.05	102	0.96
236	8.08	34.00	2.30	154							
276	7.38	34.08	1.95	139							
335	6.92	34.14	1.25	128							
409	6.28	34.23	0.62	113							
485	6.12	34.24	0.37	104							
565	5.72	34.34	0.38	98							

ORCA; February 26, 1959; 2128 GCT; 31°44'N, 121°18'W; sounding, 2000 fm; wind, 300°, force 3; weather, overcast; sea, very rough; wire angle, 11°. 90.80

1	16.15	33.61	5.48	328	0	(16.15)	(33.61)	(5.48)	(24.67)	(328)	(0.00)
11	16.10	33.62	5.46	327	10	16.10	33.62	5.46	24.68	327	0.03
30	16.06	33.62	5.47	326	20	16.07	33.62	5.46	24.69	326	0.06
50	16.06	33.62	5.50	326	30	16.06	33.62	5.47	24.69	326	0.10
65	16.06	33.62	5.44	326	50	16.06	33.62	5.50	24.69	326	0.16
80	16.08	33.64	5.48	325	75	16.07	33.64	5.48	24.70	325	0.24
100	15.88	33.58	5.48	325	100	15.88	33.58	5.48	24.70	325	0.33
115	14.19	33.58	5.36	290	150	10.83	33.58	4.73	25.71	228	0.47
130	13.07	33.60	5.16	266	200	9.20	33.70	3.73	26.09	193	0.57
149	10.88	33.57	4.77	230	250	8.10	33.96	2.67	26.46	158	0.66
179	9.69	33.62	4.26	206	300	7.33	34.01	2.08	26.61	144	0.74
203	9.12	33.71	3.65	191	400	6.50	34.13	1.10	26.83	123	0.88
252	8.06	33.97	2.61	156	500	5.84	34.20	0.61	26.96	110	1.00
307	7.24	34.02	1.97	141							
358	6.76	34.09	1.40	129							
407	6.46	34.14	1.05	122							
511	5.79	34.21	0.57	108							
560	5.58	34.25	0.42	103							

a) Mean value of 12.34 and 12.48°C.

SIO

CCOFI 5902

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.90	ORCA; February 8, 1959; 0753 GCT; 31°24.5'N, 122°00'W; sounding, 2000 fm; wind, 250°, force 2; weather, drizzle; sea, moderate; wire angle, 01°.										
0	15.80	33.49		330	0	15.80	33.49		24.66	330	0.00
10	15.78	33.49		330	10	15.78	33.49		24.66	330	0.03
30	15.77	33.51		327	20	15.78	33.50		24.67	328	0.06
55	15.83	33.48		331	30	15.77	33.51		24.68	327	0.10
65	16.30	33.65		328	50	15.80	33.48		24.65	330	0.16
75	16.25	33.76		320	75	16.25	33.76		24.76	320	0.24
90	15.17	33.77		296	100	14.09	33.71		25.20	278	0.32
105	12.75	33.46		271	150	9.96	33.59		25.88	213	0.45
131	11.73	33.68		236	200	8.61	33.90		26.34	169	0.54
150	9.96	33.59		213	250	7.79	34.06		26.59	146	0.62
176	9.08	33.78		186	300	7.23	34.10		26.70	135	0.70
206	8.50	33.93		165	400	6.32	34.20		26.90	116	0.83
236	7.98	34.04		150	500	5.74	34.24		27.01	106	0.94
276	7.50	34.08		141							
336	6.82	34.13		128							
411	6.26	34.20		115							
486	5.81	34.23		108							
567	5.36	34.34		94							
90.90	ORCA; February 26, 1959; 1600 GCT; 31°19.5'N, 121°58.5'W; sounding, 2100 fm; wind, 300°, force 3; weather, partly cloudy; sea, very rough; wire angle, 10°.										
2	15.02	33.30	5.68	328	0	(15.02)	(33.30)	(5.68)	(24.67)	(328)	(0.00)
12	15.02	33.28	5.62	329	10	15.02	33.28	5.62	24.66	329	0.03
31	15.10	33.31	5.63	328	20	15.05	33.28	5.62	24.66	329	0.06
50	15.04	33.28	5.58	329	30	15.09	33.31	5.63	24.67	328	0.10
65	15.01	33.30	5.52	328	50	15.04	33.28	5.58	24.66	329	0.16
80	14.99	33.30	5.59	327	75	15.00	33.30	5.56	24.68	327	0.25
100	13.33	33.29	5.45	294	100	13.33	33.29	5.45	25.03	294	0.33
115	13.04	33.53	4.97	271	150	9.82	33.55	3.98	25.87	214	0.45
130	11.16	33.42	4.59	246	200	8.83	33.86	2.96	26.28	175	0.55
149	9.87	33.54	4.01	216	250	7.90	33.97	2.74	26.50	154	0.64
178	9.06	33.77	3.22	186	300	7.31	34.04	1.90	26.64	141	0.72
202	8.80	33.87	2.95	174	400	6.38	34.15	0.96	26.86	120	0.85
252	7.88	33.97	2.73	154	500	5.72	34.22	0.50	26.99	108	0.97
307	7.24	34.05	1.78	139							
357	6.74	34.13	1.24	126							
407	6.34	34.16	0.92	119							
511	5.68	34.23	0.47	106							
560	5.44	34.27	0.41	100							
93.28	ORCA; February 6, 1959; 2352 GCT;[a] 32°54.5'N, 117°22'W; sounding, 325 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 06°.										
332	7.88	34.24		134							
341	7.82	34.20		136							
351	7.72	34.22		133							
361	7.56	34.20		132							
371	7.50	34.22		130							
380	7.34	34.22		128							
391	7.14	34.22		125							
399	7.09	34.23		124							
410	6.97	34.25		120							
420	6.85	34.25		119							
430	6.82	34.27		117							
439	6.69	34.28		115							
449	6.61	34.27		114							
459	6.58	34.28		113							
468	6.51	34.27		113							
479	6.46	34.33u									
488	6.46	34.29		111							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; February 24, 1959; 2014 GCT; 32°54.5'N, 117°22.5'W; sounding, 324 fm; wind, 290°, force 1; weather, partly cloudy; sea, moderate; wire angle, 02°. 93.28

0	15.42	33.57	5.28	316	0	15.42	33.57	5.28	24.80	316	0.00
10	15.13	33.57	5.18	310	10	15.13	33.57	5.18	24.86	310	0.03
30	14.94	33.57	4.90	306	20	15.02	33.57	5.04	24.88	308	0.06
50	13.36	33.60	3.63	272	30	14.94	33.57	4.90	24.91	306	0.09
75	12.14	33.66	3.27	245	50	13.36	33.60	3.63	25.26	272	0.15
100	10.92	33.73	2.77	218	75	12.14	33.66	3.27	25.54	245	0.22
125	10.18	33.85	2.77	197	100	10.92	33.73	2.77	25.82	218	0.27
165	10.14	34.14	1.67	175	150	10.15	34.04	2.07	26.20	182	0.37
205	10.06	34.27	0.99	165	200	10.10	34.26	1.03	26.37	166	0.46
255	8.96	34.20	1.33	152	250	9.06	34.21	1.31	26.51	153	0.54
305	8.31	34.22	1.13	142	300	8.37	34.22	1.17	26.63	142	0.62
360	7.88	34.25	0.95	133	400	7.59	34.24	0.89	26.75	130	0.76
410	7.50	34.23	0.87	129							

ORCA; February 24, 1959; 2217 GCT; 32°49.5'N, 117°32'W; sounding, 425 fm; wind, 290°, force 4; weather, partly cloudy; sea, moderate; wire angle, 12°. 93.30

1	15.96	33.56	5.61	328	0	(15.96)	(33.56)	(5.61)	(24.67)	(328)	(0.00)
10	15.42	33.56	5.73	317	10	15.42	33.56	5.73	24.79	317	0.03
30	15.36	33.58	6.79u	314	20	15.40	33.57	5.63	24.81	315	0.06
40	15.31	33.57	5.30	313	30	15.36	33.58	5.37	24.82	314	0.10
50	15.63	33.52	4.68	283	50	15.63	33.52	4.68	25.15	283	0.16
65	12.59	33.60	3.30	258	75	11.93	33.63	3.24	25.56	244	0.22
80	11.70	33.64	3.23	239	100	11.07	33.73	3.36	25.80	220	0.28
104	10.94	33.75	3.36	217	150	10.08	33.96	2.38	26.15	188	0.38
129	10.36	33.84	2.72	201	200	9.86	34.18	1.74	26.36	168	0.47
153	10.04	33.98	2.32	186	250	9.47	34.32	0.92	26.54	151	0.56
188	9.93	34.11	-	174	300	8.80	34.25	1.45	26.59	146	0.63
212	9.78	34.24	1.51	162	400	7.76	34.29	0.89	26.77	128	0.77
262	9.37	34.33	0.83	149	500	6.74	34.30	0.57	26.93	114	0.90
311	8.63	34.24	1.52	144							
367	8.06	34.27	0.95	134							
417	7.61a)	34.30	0.85	125							
521	6.52	34.30	0.51	111							
571	6.10	34.31	0.50	105							

ORCA; February 25, 1959; 0211 GCT; 32°39.5'N, 117°52.5'W; sounding, 320 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 10°. 93.35

0	15.72	33.55	5.17	324	0	15.72	33.55	5.17	24.72	324	0.00
10	15.49	33.55	5.46	319	10	15.49	33.55	5.46	24.77	319	0.03
30	15.37	33.58	5.46	314	20	15.39	33.56	5.46	24.81	315	0.06
50	14.33	33.55	4.94	294	30	15.37	33.58	5.46	24.82	314	0.10
75	12.30	33.55	4.38	256	50	14.33	33.55	4.94	25.02	294	0.16
99	11.14	33.62	3.92	230	75	12.30	33.55	4.38	25.42	256	0.22
124	10.52	33.75	3.12	210	100	11.10	33.62	3.90	25.70	230	0.29
164	9.63	33.96	2.49	180	150	9.93	33.89	2.70	26.12	190	0.39
203	9.16	34.14	1.90	160	200	9.19	34.12	1.96	26.43	161	0.48
253	8.66	34.21	1.47	147	250	8.70	34.21	1.47	26.57	148	0.56
302	8.11	34.20	1.19	140	300	8.13	34.20	1.20	26.64	140	0.64
357	7.70	34.26	0.94	130	400	7.27	34.31	0.73	26.85	121	0.77
407	7.20	34.32	0.69	119							

a) Mean value of 7.58 and 7.64°C.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

93.40 ORCA; February 25, 1959; 0506, 0539 GCT; 32°37.5'N, 118°12.5'W; sounding, 850 fm; wind, 270°, force 3; weather, clear; sea, moderate; wire angle, 09°, 14°.

0	15.74	33.58	5.58	322	0	15.74	33.58	5.58	24.74	322	0.00
11	15.60	33.58	5.63	319	10	15.61	33.58	5.63	24.77	319	0.03
31	15.46	33.57	5.61	317	20	15.53	33.57	5.62	24.78	318	0.06
41	15.36	33.58	5.47	314	30	15.47	33.57	5.61	24.79	317	0.10
50	13.86	33.53	4.79	287	50	13.86	33.53	4.79	25.10	287	0.16
65	12.84	33.58	4.33	264	75	12.15	33.59	3.99	25.49	250	0.22
80	11.86	33.60	3.85	244	100	11.12	33.67	3.54	25.73	227	0.28
106	10.95	33.69	3.47	222	150	9.91	33.91	2.63	26.14	189	0.39
129	10.38	33.84	2.99	201	200	9.27	34.12	1.99	26.41	163	0.48
155	9.81	33.93	2.54	186	250	8.77	34.22	1.49	26.57	147	0.56
190	9.37	34.10	2.12	166	300	8.00	34.22	1.31	26.69	136	0.63
					400	6.81	34.22	0.73	26.85	121	0.76
209	9.20	34.14	1.82	160	500	6.19	34.28	0.53	26.98	108	0.88
255	8.71	34.23	1.46	146							
304	7.94	34.22	1.29	136							
358	7.34	34.22	1.00	128							
406	6.74	34.22	0.70	120							
509	6.14	34.29	0.50	107							
559	5.96	34.30	0.38	104							

93.50 ORCA; February 25, 1959; 1129 GCT; 32°12'N, 118°54'W; sounding, 750 fm; wind, 280°, force 2; weather, clear; sea, moderate; wire angle, 13°.

0	15.20	33.54	5.26	313	0	15.20	33.54	5.26	24.83	313	0.00
10	15.17	33.53	5.66	313	10	15.17	33.53	5.66	24.83	313	0.03
30	15.17	33.55	5.85a)	312	20	15.17	33.54	5.78	24.83	313	0.06
40	14.98	33.52	5.54	310	30	15.17	33.55	5.85	24.84	312	0.09
50	13.26	33.51	4.87	277	50	13.26	33.51	4.87	25.21	277	0.15
65	12.12	33.51	4.40	256	75	11.14	33.56	3.87	25.65	235	0.22
79	10.97	33.57	3.78	231	100	10.74	33.66	3.69	25.80	221	0.28
99	10.76	33.66	3.71	221	150	9.11	33.88	2.69	26.25	178	0.37
123	9.77	33.77	3.04	196	200	8.75	34.00	2.22	26.40	164	0.46
147	9.16	33.87	2.75	180	250	8.36	34.09	1.74	26.53	152	0.54
176	8.89	33.98	2.32	168	300	7.97	34.14	1.32	26.63	142	0.62
200	8.75	34.00	2.22	164	400	7.08	34.25	0.74	26.84	122	0.75
248	8.38	34.09	1.75	152	500	6.41	34.29	0.43	26.96	110	0.88
302	7.95	34.14	1.31	142							
352	7.40	34.18	1.03	132							
402	7.06	34.25	0.73	122							
505	6.38	34.29	0.42	110							
554	6.02	34.30	0.30	105							

93.60 ORCA; February 25, 1959; 1744 GCT; 31°57.5'N, 119°35'W; sounding, 1200 fm; wind, 280°, force 2; weather, clear; sea, very rough; wire angle, 02°.

1	15.76	33.55	5.39	324	0	(15.76)	(33.55)	(5.39)	(24.72)	(324)	(0.00)
11	15.70	33.55	5.38	323	10	15.70	33.55	5.38	24.73	323	0.03
30	15.71	33.55	5.38	323	20	15.70	33.55	5.38	24.73	323	0.06
52	15.70	33.55	5.50	323	30	15.71	33.55	5.38	24.73	323	0.10
65	14.66	33.54	4.92	302	50	15.70	33.55	5.49	24.73	323	0.16
81	12.90	33.59	4.13	264	75	13.50	33.57	4.38	25.21	277	0.24
101	11.91	33.60	4.00	246	100	11.96	33.60	4.00	25.54	246	0.30
116	11.07	33.66	3.43	226	150	9.58	33.69	3.79	26.02	200	0.41
130	10.31	33.71	3.70	210	200	8.86	33.90	2.59	26.30	173	0.51
151	9.55	33.69	3.79	200	250	8.03	34.10	1.78	26.58	146	0.59
176	9.23	33.81	3.20	186	300	7.49	34.14	1.41	26.70	136	0.66
201	8.84	33.91	2.57	172	400	6.62	34.24	0.87	26.89	117	0.79
256	7.95	34.11	1.70	144	500	5.87	34.29	0.67	27.03	104	0.91
307	7.41	34.14	1.38	135							
357	6.92	34.22	1.02	122							
407	6.57	34.24	0.85	116							
512	5.80	34.30	0.61	102							
562	5.77	34.33	0.33	100							

a) Alternate value, 5.41 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

93.70

ORCA; February 25, 1959; 2350 GCT; 31°30'N, 120°19.5'W; sounding, 2100 fm; wind, 280°, force 2; weather, clear; sea, very rough; wire angle, 10°.

1	16.20	33.57	5.56	332	0	(16.20)	(33.57)	(5.56)	(24.63)	(332)	(0.00)
10	15.68	33.58	5.52	321	10	15.68	33.58	5.52	24.75	321	0.03
30	15.66	33.57	5.50	321	20	15.66	33.58	5.51	24.75	321	0.06
51	15.67	33.54	5.50	323	30	15.66	33.57	5.50	24.75	321	0.10
65	15.66	33.57	5.58	321	50	15.67	33.54	5.50	24.73	323	0.16
80	15.64	33.57	5.52	320	75	15.65	33.57	5.53	24.75	321	0.24
100	14.22	33.62	5.47	287	100	14.22	33.62	5.47	25.10	287	0.32
114	13.14	33.55	5.17	272	150	10.09	33.59	4.00	25.86	215	0.45
129	11.28	33.44	4.58	246	200	8.76	33.86	3.09	26.28	175	0.54
148	10.14	33.57	4.07	217	250	8.03	34.00	2.10	26.50	154	0.63
176	9.34	33.71	3.34	194	300	7.39	34.07	1.55	26.66	139	0.71
201	8.74	33.86	3.08	174	400	6.62	34.14	0.89	26.82	124	0.84
249	8.05	33.99	2.14	155	500	5.90	34.24	0.55	26.98	108	0.96
302	7.36	34.07	1.53	139							
352	6.80	34.09	1.34	130							
400	6.62	34.14	0.89	124							
503	5.89	34.24	0.54	108							
552	5.61	34.27	0.44	102							

93.80

ORCA; February 26, 1959; 0449 GCT; 31°07'N, 120°56'W; sounding, 2200 fm; wind, 280°, force 3; weather, clear; sea, very rough; wire angle, 12°.

1	16.20	33.66	5.09	326	0	(16.20)	(33.66)	(5.09)	(24.70)	(326)	(0.00)
11	16.21	33.67	5.25	325	10	16.21	33.67	5.24	24.71	325	0.03
31	16.16	33.65	5.36	326	20	16.19	33.66	5.30	24.70	326	0.06
50	16.14	33.68	5.38	323	30	16.16	33.65	5.36	24.70	326	0.10
64	16.14	33.66	5.40	325	50	16.14	33.68	5.38	24.73	323	0.16
79	16.15	33.68	5.48	323	75	16.14	33.67	5.44	24.72	324	0.24
103	14.58	33.58	5.50	298	100	15.00	33.60	5.50	24.92	305	0.32
117	12.63	33.55	4.91	262	150	10.48	33.57	4.49	25.77	223	0.45
132	11.16	33.55	4.69	236	200	8.90	33.82	3.49	26.23	180	0.56
151	10.44	33.57	4.48	222	250	8.03	33.98	2.46	26.49	155	0.64
185	9.26	33.75	3.97	190	300	7.47	34.05	2.07	26.63	142	0.72
209	8.71	33.86	3.19	174	400	6.53	34.13	1.08	26.82	124	0.86
259	7.92	34.00	2.35	152	500	5.94	34.28	0.75	27.01	106	0.98
308	7.37	34.05	2.00	140							
362	6.84	34.14	1.37	127							
412	6.46	34.13	1.02	123							
515	5.84	34.30	0.71	103							
565	5.49	34.29	0.64	.99							

93.90

ORCA; February 26, 1959; 1001 GCT; 30°47'N, 121°36'W; sounding, 2240 fm; wind, 280°, force 3; weather, clear; sea, very rough; wire angle, 10°.

1	16.28	33.68	5.40	327	0	(16.28)	(33.68)	(5.40)	(24.68)	(327)	(0.00)
11	16.30	33.65	5.47	329	10	16.30	33.65	5.47	24.67	329	0.03
30	16.30	33.71	5.42	325	20	16.30	33.67	5.41	24.68	327	0.06
50	16.32	33.69	5.21	326	30	16.30	33.71	5.42	24.71	325	0.10
64	16.35	33.73	5.37	324	50	16.32	33.69	5.21	24.69	326	0.16
79	16.36	33.72	5.03	325	75	16.36	33.71	5.20	24.71	325	0.24
100	16.35	33.73	5.06	324	100	16.35	33.73	5.06	24.72	324	0.33
115	14.50	33.62	5.29	293	150	11.42	33.57	4.84	25.60	240	0.47
130	13.11	33.60	4.84	268	200	9.16	33.74	3.66	26.13	189	0.58
150	11.42	33.57	4.84	240	250	8.41	33.97	2.41	26.43	161	0.67
179	9.72	33.66	4.10	204	300	7.67	34.07	2.01	26.61	143	0.75
204	9.08	33.77	3.55	187	400	6.67	34.13	1.06	26.81	125	0.89
253	8.38	33.98	2.37	160	500	6.03	34.24	0.50	26.97	109	1.01
307	7.56	34.08	1.95	141							
357	7.04	34.12	1.41	132							
407	6.62	34.14	1.02	124							
510	5.98	34.25	0.46	108							
559	5.68	34.29	0.41	102							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T_3}^{-5}$	Z	T	S	O_2	σ_t	$\delta_{T_3}^{-5}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

97.32 PAOLINA-T; February 7, 1959; 0430, 0509 GCT;[a] 32°11.5'N, 117°17'W; sounding, 791 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°, 00°.

439	7.10	34.34	0.48	116
449	6.96	34.34	0.52	114
459	6.82	34.35	0.43	111
469	6.66	34.36	0.42	108
479	6.60	34.34	0.42	109
489	6.52	34.46r	0.42	
499	6.42	34.34	0.43	107
509	6.35	34.36	0.41	104
518	6.30	34.42	0.42	99
528	6.25	34.38	0.42	102
538	6.18	34.36	0.42	102
548	6.08	34.35	0.42	102
558	6.02	34.37	0.37	100
570	5.91	34.38	0.35	97
580	5.82	34.40	0.34	95
590	5.78	34.38	0.32	96
601	5.74	34.40	0.32	94

97.32 BLACK DOUGLAS; February 12, 1959; 0406 GCT;[a] 32°11.5'N, 117°17'W; sounding, 675 fm; wind, 200°, force 4; weather, overcast; sea, rough; wire angle, 10°.

384	8.14	34.34	1.01	130
392	8.02	34.32	-	130
398	7.92	34.31	0.63	129
407	7.82	34.33	0.71	126
416	7.68b)	34.34	0.70	124
425	7.42	34.33	-	120
435	7.30	34.31	0.64	120
443	7.11	34.29	0.64	120
451	6.90	34.27	0.66	118
461	6.84	34.29	0.72	116
469	6.74	34.31	0.68	113
478	6.64	34.30	0.56	113
486	6.56	34.29	0.51	112
495	6.49	34.29	0.60	111
504	6.44	34.27	0.55	112
513	6.30	34.31	0.63	107
522	6.26	34.31	0.41	107
530	6.24	34.27	-	110

a) Test cast.
b) Mean value of 7.62 and 7.75°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; February 13, 1959; 1735 GCT; 31°11'N, 119°10'W; sounding, 1950 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 08°. 97.60

2	15.75	33.58	5.64	322	0	(15.75)	(33.58)	(5.64)	(24.73)	(322)	(0.00)
12	15.77	33.57	5.60	323	10	15.76	33.57	5.63	24.73	322	0.03
31	15.78	33.56	5.63	324	20	15.77	33.57	5.63	24.72	323	0.06
61	14.24	33.67	4.64	284	30	15.78	33.56	5.63	24.71	324	0.10
71	13.77	33.64	4.50	277	50	15.79	33.56	5.59	24.73	322	0.16
86	12.82	33.64	4.16a)	259	75	13.42	33.63	4.40	25.27	271	0.24
100	12.29	33.65	4.17	249	100	12.29	33.65	4.17	25.50	249	0.30
115	11.05	33.72	3.49	221	150	9.76	33.80	3.51	26.08	194	0.41
140	9.98	33.73	3.85	203	200	8.77	34.04		26.44	160	0.50
159	9.58	33.89	3.04	185	250	7.85	34.09		26.61	144	0.58
190	8.88	34.04	2.54	163	300	7.37	34.16	1.50	26.73	132	0.65
219	8.50	34.05	-	157	400	6.69	34.31	0.63	26.94	112	0.78
248	7.86	34.09	-	144	500	6.22	34.36	0.46	27.05	102	0.89
297	7.40	34.16	1.55	133	600	5.69	34.40	0.40	27.13	94	0.99
352	6.94	34.25	0.92	120							
435	6.51	34.34	0.48	108							
520	6.16	34.37	0.44	101							
604	5.66	34.40	0.38	93							

PAOLINA-T; February 11, 1959; 2307 GCT; 30°50'N, 118°39'W; sounding, 1500 fm; wind, 220°, force 5; weather, drizzle; sea, very rough; wire angle, 13°. 100.60

2	16.32	33.69	5.00	326	0	(16.32)	(33.69)	(5.00)	(24.69)	(326)	(0.00)
10	16.36	33.71	5.54	325	10	16.36	33.71	5.54	24.70	325	0.03
36	16.32	33.73	5.53	323	20	16.34	33.72	5.55	24.71	324	0.06
65	15.15	33.64	4.91	305	30	16.32	33.73	5.55	24.72	323	0.10
75	13.54	33.56	4.70	279	50	16.31	33.74	5.53	24.73	322	0.16
94	11.78	33.58	4.33	244	75	13.54	33.56	4.70	25.19	279	0.24
108	10.94	33.62	4.17	227	100	11.42	33.59	4.29	25.62	238	0.30
123	10.09	33.73	3.84	205	150	9.54	33.89	3.07	26.19	184	0.41
151	9.52	33.89	3.04	184	200	8.93	34.05	2.33	26.41	163	0.50
171	9.20	33.95	2.74	174	250	8.40	34.19	1.63	26.60	145	0.57
201	8.92	34.05	2.31	163	300	7.70	34.23	1.13	26.74	131	0.65
236	8.58	34.16	1.77	150	400	6.84	34.33	0.70	26.93	113	0.77
263	8.26	34.22	1.52	141	500	6.09	34.35	0.42	27.05	102	0.89
313	7.53	34.24	1.02	129	600	5.50	34.38	0.38	27.14	93	0.99
377	7.03	34.32	0.77	116							
475	6.24	34.34	0.45	105							
564	5.69	34.36	0.38	96							
638	5.32	34.39	0.38	90							

PAOLINA-T; February 10, 1959; 0251 GCT; 30°07'N, 118°26'W; sounding, 2100 fm; wind, 300°, force 4; weather, partly cloudy; sea, very rough; wire angle, 08°. 103.60

1	16.16	33.63	5.66b)	327	0	(16.16)	(33.63)	(5.66)	(24.68)	(327)	(0.00)
11	16.21	33.62	5.50	329	10	16.21	33.62	5.50	24.66	329	0.03
31	16.15	33.60	5.55	329	20	16.20	33.61	5.52	24.66	329	0.06
60	16.10	33.62	5.49	327	30	16.15	33.60	5.55	24.66	329	0.10
70	16.14	33.61	5.53	328	50	16.10	33.60	5.50	24.68	327	0.16
86	14.39	33.55	5.53	296	75	16.19	33.61	5.53	24.66	329	0.25
99	13.35	33.57	5.33	274	100	13.34	33.57	5.33	25.24	274	0.32
115	11.02	33.58	4.77	231	150	9.70	33.68	4.06	25.99	202	0.44
139	10.06	33.61	4.34	213	200	8.70	33.97	2.79	26.37	166	0.53
159	9.40	33.75	3.76	192	250	8.06	34.13	2.01	26.61	144	0.61
188	8.96	33.91	3.05	174	300	7.62	34.19	1.60	26.71	134	0.69
217	8.36	34.04	2.40	155	400	6.72	34.27	0.80	26.91	115	0.82
246	8.09	34.12	2.08	146	500	6.16	34.34	0.49	27.04	103	0.93
295	7.68	34.18	1.65	135	600	5.54	34.41	0.37	27.17	91	1.03
349	7.02	34.22	1.14	124							
433	6.52	34.30	0.63	111							
517	6.05	34.35	0.45	102							
603	5.52	34.41	0.37	91							

a) Mean value of 4.08 and 4.25 ml/L.
b) Mean value of 5.60 and 5.73 ml/L.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
107.60	PAOLINA-T; February 8, 1959; 1309 GCT; 29°28'N, 117°57.5'W; sounding, 1900 fm; wind, 200°, force 3; weather, rain; sea, slight; wire angle, 02°.										
1	17.17	33.89	5.44	330	0	(17.17)	(33.89)	(5.44)	(24.65)	(330)	(0.00)
11	17.20	33.91	5.22	330	10	17.20	33.91	5.25	24.65	330	0.03
31	17.20	33.91	5.18	330	20	17.20	33.91	5.21	24.65	330	0.07
56	17.20	33.92	5.33	329	30	17.20	33.91	5.20	24.65	330	0.10
66	17.20	33.90	5.40	331	50	17.20	33.91	5.27	24.66	329	0.16
76	17.20	33.91	5.40	330	75	17.20	33.91	5.40	24.65	330	0.25
90	14.94	33.68	5.49	298	100	14.10	33.68	5.34	25.16	281	0.33
105	13.78	33.68	-	275	150	10.09	33.77	3.34	25.99	202	0.44
130	11.02	33.69	4.38	223	200	9.51	33.94	2.88	26.23	180	0.54
150	10.09	33.77	3.34	202	250	8.95	34.07	2.18	26.42	162	0.63
174	9.84	33.85	3.10	192	300	8.25	34.20	1.60	26.63	142	0.71
204	9.46	33.96	2.82	178	400	7.25	34.31	0.62	26.86	120	0.84
234	9.12	34.04	2.38	167	500	6.54	34.41	0.37	27.05	102	0.96
274	8.70	34.13	1.85	154							
333	7.69	34.28	1.33	128							
407	7.20	34.31	0.58	120							
481	6.68	34.42	0.38	104							
562	6.10	34.39	0.33	99							
107.70	PAOLINA-T; February 9, 1959; 0140 GCT; 29°10'N, 118°39.5'W; sounding, 1860 fm; wind, 290°, force 6; weather, rain; sea, rough; wire angle, 20°.										
2	17.14	33.89a)	5.49	330	0	(17.14)	(33.89)	(5.49)	(24.65)	(330)	(0.00)
11	17.18	33.86	5.45	333	10	17.19	33.86	5.46	24.62	333	0.03
30	17.16	33.86	5.43	332	20	17.18	33.86	5.44	24.62	333	0.07
57	17.12	33.87	5.47	331	30	17.16	33.86	5.43	24.63	332	0.10
65	17.06	33.89	5.44	328	50	17.13	33.87	5.45	24.64	331	0.17
78	16.94	33.89	5.36	326	75	16.97	33.89	5.38	24.69	326	0.25
93	14.96	33.77	5.44	292	100	14.83	33.77	5.42	25.08	289	0.33
108	14.30	33.91	5.11	268	150	10.59	33.73	3.77	25.88	213	0.45
128	11.59	33.58	4.70	241	200	8.95	33.91	3.14	26.30	173	0.55
146	10.74	33.71	3.87	217	250	8.30	34.11	2.29	26.55	149	0.63
172	9.69	33.84	3.30	190	300	7.76	34.20	1.59	26.71	134	0.71
199	8.96	33.91	3.13	174	400	6.91	34.28	0.80	26.89	117	0.84
226	8.50	34.05	2.69	156	500	6.34	34.39	0.39	27.05	102	0.95
270	8.18	34.16	1.94	144							
319	7.51	34.23	1.37	129							
398	6.92	34.28	0.80	117							
479	6.44	34.38	0.41	104							
561	6.10	34.41	0.33	98							
110.60	BLACK DOUGLAS; February 14, 1959; 0605 GCT; 28°56.5'N, 117°39'W; sounding, 2040 fm; wind, 360°, force 4; weather, cloudy; sea, moderate; wire angle, 05°.										
0	17.12	33.82	5.62	335	0	17.12	33.82	5.62	24.61	335	0.00
10	17.13	33.82	5.76	335	10	17.13	33.82	5.76	24.61	335	0.03
28	17.14	33.82	5.70	335	20	17.14	33.82	5.73	24.61	335	0.07
51	17.08	33.81	5.69	335	30	17.14	33.82	5.70	24.61	335	0.10
60	16.94	33.78	5.82	333	50	17.09	33.81	5.69	24.61	335	0.17
69	16.92	33.77	5.76	334	75	16.92	33.77	5.70	24.61	334	0.25
82	16.65	33.78	5.69	327	100	14.42	33.67	5.20	25.10	288	0.33
95	14.86	33.69	5.37	296	150	11.65	33.82	3.41	25.75	225	0.46
118	12.76	33.62	4.39	260	200	10.54	34.04	2.27	26.13	189	0.56
136	12.16	33.75	3.66	238	250	9.12	34.12	2.12	26.44	160	0.65
159	11.32	33.86	3.22	216	300	8.71	34.25	1.50	26.60	145	0.73
184	10.80	33.96	2.62	200	400	7.89	34.36	0.54	26.81	125	0.87
212	10.34	34.11	2.04	180	500	6.90	34.34	0.42	26.94	113	1.00
248	9.14	34.11	2.13	161							
300	8.71	34.25	1.50	145							
368	8.31	34.36	0.67	131							
434	7.36	34.35	0.49	118							
506	6.86	34.34	0.41	113							

a) Salinity bottle numbers were not recorded on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
BLACK DOUGLAS; February 14, 1959; 0022 GCT; 28°36.5'N, 118°18'W; sounding, 1550 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 03°.											110.70
1	17.56	33.84	-	343	0	(17.56)	(33.84)		(24.51)	(343)	(0.00)
10	17.56	33.87	-	341	10	17.56	33.87		24.54	341	0.03
28	17.40	33.87	-	338	20	17.48	33.87		24.55	340	0.07
51	17.39	33.84	-	340	30	17.40	33.87		24.57	338	0.10
59	17.38	33.84	-	340	50	17.39	33.84		24.55	340	0.17
69	17.40	33.84	-	340	75	17.40	33.84		24.55	340	0.25
82	17.13	33.83	-	334	100	14.10	33.66		25.16	282	0.33
95	14.34	-	-		150	11.16	33.86		25.88	213	0.46
118	12.44	33.61	-	254	200	10.60	34.14	1.83	26.20	183	0.56
136	11.19	33.73	-	223	250	9.19	34.20	1.81	26.48	156	0.64
159	11.15	33.93	-	208	300	8.70	34.28	1.22	26.63	142	0.72
186	10.86	34.02	2.24	196	400	7.47	34.31	0.64	26.83	123	0.86
213	10.34	34.25	1.56	170	500	(6.37)	(34.33)	(0.42)	(27.00)	(107)	(0.98)
249	9.26	34.20	1.83	156							
304	8.64	34.29	1.18	141							
372	7.90	34.31	0.76	128							
428p	7.06	34.31	0.53	118							
491p	6.44	34.33	0.42	108							
BLACK DOUGLAS; February 15, 1959; 1222, 1302 GCT; 28°42'N, 116°37.5'W; sounding, 1750 fm; wind, 080°, force 3; weather, partly cloudy; sea, moderate; wire angle, 02°, 05°.											113.50
1	17.05	33.78	5.65	336	0	(17.05)	(33.78)	(5.65)	(24.59)	(336)	(0.00)
10	17.07	33.79	5.63	336	10	17.07	33.79	5.63	24.59	336	0.03
29	17.05	33.79	5.62	336	20	17.06	33.79	5.62	24.59	336	0.07
51	17.06	33.80	5.25	335	30	17.05	33.79	5.61	24.59	336	0.10
60	17.06	33.82	5.58	333	50	17.06	33.80	5.26	24.60	335	0.17
69	17.04	33.88	5.69	329	75	17.00	33.88	5.69	24.67	328	0.25
83	16.50	33.78	5.67	324	100	14.21	33.69	5.00	25.15	282	0.33
96	14.90	33.68	5.37	297	150	11.48	33.96	2.77	25.90	211	0.45
119	12.66	33.77	3.85	246	200	10.93	34.32	1.36	26.28	175	0.55
137	12.00	33.95	3.00	221	250	10.25	34.49	0.80	26.54	151	0.63
160	11.18	33.96	-	206	300	9.33	34.42	0.78	26.63	142	0.71
					400	7.92	34.35	0.58	26.80	126	0.85
159a)	11.20	33.96	2.61	206	500	6.72	34.32	0.41	26.95	112	0.97
186	10.98	34.18	1.71	186							
213	10.84	34.40	1.14	168							
249	10.26	34.49	0.80	151							
304	9.26	34.42	0.78	141							
371	8.40	34.40	0.57	129							
439	7.26	34.29	0.61	122							
511	6.61	34.33	0.35	110							
BLACK DOUGLAS; February 15, 1959; 1855 GCT; 28°15'N, 117°29'W; sounding, 1780 fm; wind, 080°, force 2; weather, drizzle; sea, moderate; wire angle, 04°.											113.60
0	16.99	33.78	5.84	334	0	16.99	33.78	5.84	24.61	334	0.00
10	17.02	33.80	5.75	334	10	17.02	33.80	5.75	24.61	334	0.03
28	17.02	33.81	5.71	334	20	17.02	33.80	5.72	24.61	334	0.07
51	17.02	33.78	5.65	336	30	17.02	33.81	5.70	24.62	334	0.10
59	17.02	33.78	5.77	336	50	17.02	33.78	5.65	24.59	336	0.17
69	17.02	33.80	5.69	334	75	17.02	33.80	5.58	24.61	334	0.25
82	16.64	33.78	5.48	327	100	14.98	33.70	4.92	24.98	298	0.33
95	15.22	33.69	4.91	303							
118	13.36	33.73	5.30	262							
136	11.84	33.62	5.17	243							

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
117.50	BLACK DOUGLAS; February 16, 1959; 1424 GCT; 28°12.5'N, 116°06.5'W; sounding, 2400 fm; wind, 160°, force 1; weather, rain; sea, moderate; wire angle, 00°.										
0	17.67	33.96	5.49	337	0	17.67	33.96	5.49	24.58	337	0.00
10	17.66	-	5.54		10	17.66	33.93	5.54	24.56	339	0.03
28	17.61	33.86	5.37	343	20	17.64	33.89	5.46	24.52	342	0.07
51	16.93	33.95	5.30	321	30	17.61	33.86	5.36	24.51	343	0.10
60	15.82	33.83	4.57	306	50	17.02	33.95	5.31	24.73	323	0.17
69	14.86	33.78	4.30	289	75	14.60	33.77	4.23	25.13	284	0.24
82	14.30	33.76	4.12	279	100	13.00	33.75	3.86	25.45	254	0.31
96	13.48	33.77	3.94	262	150	10.40	33.83	3.20	26.00	202	0.43
119	11.66	33.72	3.69	232	200	9.49	34.08	2.48	26.34	170	0.52
137	10.93	33.79	3.27	214	250	9.79	34.39	0.91	26.54	150	0.60
159	10.04	33.86	3.20	195	300	9.23	34.43	0.67	26.66	140	0.68
187	9.64	34.04	2.71	175	400	8.00	34.37	0.47	26.81	125	0.82
214	9.37	34.11	2.22	165	500	7.13	34.37	0.28	26.92	114	0.94
250	9.79	34.39	0.91	150							
305	9.16	34.43	0.65	138							
373	8.34	34.39	0.53	129							
441	7.54	34.36	0.38	120							
513	7.04	34.38	0.25	112							
120.50	BLACK DOUGLAS; February 18, 1959; 0402, 0448 GCT; 27°33'N, 115°52.5'W; sounding, 2100 fm; wind, direction missing, force 1; weather, overcast; sea, moderate; wire angle, 00°, missing.										
1	18.79	34.02	5.29	359	0	(18.79)	(34.02)	(5.29)	(24.34)	(359)	(0.00)
10	18.73	34.05	5.34	356	10	18.73	34.05	5.34	24.38	356	0.04
28	18.57	34.04	5.34	352	20	18.64	34.04	5.34	24.40	354	0.07
51	18.55	34.04	5.28	352	30	18.56	34.04	5.33	24.42	352	0.10
60	18.54	34.04	5.25	352	50	18.55	34.04	5.28	24.42	352	0.18
69	16.92	33.87	5.16	326	75	15.85	33.77	4.97	24.86	310	0.26
83	14.78	33.70	4.73	293	100	13.20	33.72	4.34	25.38	260	0.33
96	13.54	33.73	4.39	266	150	11.60	34.04	2.57	25.93	208	0.45
119	11.91	33.69	4.14	238	200	10.76	34.36	1.20	26.34	170	0.55
137	11.37	33.75	3.62	224	250	9.89	34.42	0.97	26.55	150	0.63
160	11.80	34.22	1.85	198	300	9.15	34.43	0.60	26.67	138	0.70
187	11.20	34.35	1.17	178	400	8.22	34.45	0.40	26.84	122	0.84
214	10.29	34.36	1.27	161	500	7.02	34.42	0.28	26.98	108	0.96
250	9.89	34.42	0.97	150							
301	9.14	34.43	0.58	138							
368	8.61	34.46	0.43	128							
436	7.73	34.44	0.37	116							
508	6.92	34.42	0.27	107							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T}^{-5} 10^{3} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T}^{-5} 10^{3} cm/g	ΔD dyn. m

120.80

BLACK DOUGLAS; February 18, 1959; 1924 GCT; 36°32.5'N, 117°48.5'W; sounding, 2200 fm; wind, 270°, force 2; weather, cloudy; sea, rough; wire angle, 03°.

1	18.71	34.01	5.43	358	0	(18.71)	(34.01)	(5.43)	(24.36)	(358)	(0.00)
10	18.58	34.02	5.39	354	10	18.58	34.02	5.39	24.40	354	0.04
28	18.41	34.03	5.34	349	20	18.48	34.02	5.36	24.42	352	0.07
51	18.38	34.04	5.34	348	30	18.40	34.03	5.34	24.45	349	0.10
60	18.40	34.01	5.25	350	50	18.38	34.04	5.34	24.46	348	0.18
69	18.40	34.04	5.33	348	75	17.95	33.99	5.28	24.52	342	0.26
82	15.87	33.76	4.84	311	100	13.10	33.70	4.06	25.38	260	0.34
96	13.42	33.69	4.18	267	150	10.62	33.92	2.70	26.03	199	0.45
118	11.70	33.78	3.41	228	200	9.90	34.17	1.90	26.34	170	0.55
136	11.05	33.86	2.90	211	250	9.56	34.38	1.03	26.57	148	0.63
159	10.38	33.96	2.59	192	300	8.82	34.34	0.89	26.66	139	0.70
186	10.06	34.13	2.09	175	400	7.52	34.36	0.51	26.86	120	0.84
216	9.74	34.21	1.62a)	163	500	6.54	34.35	0.44	27.00	107	0.96
249	9.57	34.38	1.03	148							
303	8.77	34.34	0.88	139							
369	7.92	34.36	0.51	125							
437	7.04	34.35	0.50	114							
510	6.46	34.36	0.40	106							

123.42

BLACK DOUGLAS; February 25, 1959; 0657 GCT; 27°14'N, 114°59'W; sounding, 650 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 28°.

0	18.26	34.14	5.51	338	0	18.26	34.14	5.51	24.58	338	0.00
9	18.26	34.13	5.53	338	10	18.26	34.13	5.53	24.56	338	0.03
25	18.26	34.16	5.47	336	20	18.26	34.15	5.48	24.58	336	0.07
32	18.28	34.13	5.51	338	30	18.27	34.13	5.50	24.56	338	0.10
45	17.77	34.03	5.39	334	50	17.32	33.97	5.28	24.67	328	0.17
57	16.74	33.89	5.13	321	75	15.08	33.70	4.72	24.98	299	0.25
77	14.79	33.68	4.61	295	100	12.49	33.68	3.95	25.49	250	0.32
93	12.84	33.69	4.08	256	150	11.29	34.05	2.13	26.00	202	0.43
109	11.94	33.68	3.70	240	200	10.85	34.38	1.04	26.34	170	0.52
125	11.47	33.78	3.20	225	250	10.49	34.49	0.54	26.49	155	0.61
149	11.30	34.05	2.14	202	300	10.06	34.55	0.37	26.60	144	0.68
177	11.06	34.25	1.36	183	400	8.49	34.49	0.31	26.82	124	0.82
201	10.82	34.38	1.02	169	500	7.32	34.42	0.26	26.94	112	0.95
241	10.58	34.47	0.59	157							
286	10.24	34.54	0.39	148							
357	9.13	34.53	0.33	130							
429	8.08	34.47	0.30	120							
503	7.27	34.42	0.25	112							

123.42

BLACK DOUGLAS; February 25, 1959; 0812 GCT;[b] 27°14'N, 114°59'W; sounding, 650 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 13°.

1	18.23	34.13	5.41	338	0	(18.23)	(34.13)	(5.41)	(24.57)	(338)	(0.00)
10	18.24	34.12	5.47	339	10	18.24	34.12	5.47	24.56	339	0.03
27	18.23	34.12	5.35	339	20	18.24	34.12	5.40	24.56	339	0.07
31	18.24	34.14	5.38	337	30	18.24	34.14	5.37	24.58	337	0.10
36	18.25	34.12	5.44	339	50	18.08	34.14	5.38	24.62	333	0.17
40	18.25	34.13	5.42	338	75	14.40	33.69	4.47	25.11	286	0.24
44	18.26	34.13	5.41	338	100	12.10	33.88	2.94	25.72	228	0.31
48	18.19	34.16	5.41	335	150	11.33	34.04	2.11	26.00	202	0.42
52	17.56	34.03	5.35	329							
56	17.13	33.96	5.13	325							
60	16.86	33.95	5.12	320							
64	16.47	33.87	5.02	317							
68	15.96	33.82	4.80	309							
73	14.95	33.70	4.51	296							
77	14.30	33.69	4.46	284							
82	14.26	33.77	4.17	277							
130	11.48	33.91	2.60	216							
175	11.20	34.29	1.27	182							

a) Alternate value, 1.74 ml/L, not used in interpolation.
b) Test cast.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
130.40	BLACK DOUGLAS; February 22, 1959; 0340 GCT; 26°09'N, 114°07.5'W; sounding, 1100 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 03°.										
1	19.68	34.39	5.29	354	0	(19.68)	(34.39)	(5.29)	(24.40)	(354)	(0.00)
10	19.67	34.34	5.30	357	10	19.67	34.34	5.30	24.36	357	0.04
28	19.18	34.34	5.29	346	20	19.40	34.34	5.30	24.44	350	0.07
50	19.08	34.34	5.33	343	30	19.17	34.34	5.30	24.50	344	0.10
59	18.88	34.34	5.25	338	50	19.08	34.34	5.33	24.52	343	0.17
69	18.73	34.42	5.25	328	75	18.05	34.31	5.08	24.75	320	0.26
82	15.68	33.87	4.29	300	100	14.36	33.96	3.09	25.33	265	0.33
96	14.55	33.96	3.16	269	150	11.39	34.04	2.39	25.98	204	0.45
118	12.38	33.88	2.91	234	200	10.72	34.34	1.14	26.34	170	0.54
136	11.62	33.95	2.66	214	250	10.44	34.50	0.55	26.51	153	0.63
159	11.22	34.11	2.15	196	300	9.55	34.41	0.50	26.59	146	0.70
186	10.79	34.27	1.46	176	400	8.69	34.50	0.24	26.80	126	0.84
212	10.67	34.40	0.91	165	500	7.54	34.42	0.22	26.90	116	0.97
248	10.47	34.50	0.56	154							
303	9.50	34.41	0.49	146							
370	9.01	34.52	0.30	130							
438	8.26	34.46	0.16	123							
510	7.42	34.41	0.24	115							
137.40	BLACK DOUGLAS; February 24, 1959; 0138 GCT; 25°01'N, 113°24.5'W; sounding, 1200 fm; wind, 360°, force 3; weather, partly cloudy; sea, rough; wire angle, 15°.										
1	21.36	34.52	5.29	387	0	(21.36)	(34.52)	(5.29)	(24.05)	(387)	(0.00)
10	21.33	34.49	5.22	388	10	21.33	34.49	5.22	24.04	388	0.04
28	20.91	34.49	5.27	377	20	21.20	34.49	5.23	24.07	385	0.08
49	20.61	34.45	5.23	372	30	20.90	34.49	5.27	24.16	377	0.12
58	20.59	34.45	5.07	372	50	20.60	34.45	5.20	24.20	372	0.19
67	20.56	34.52	4.69	366	75	20.40	34.48	4.62	24.28	365	0.28
80	19.95	34.34	4.55	364	100	18.90	34.34	4.37	24.56	339	0.37
93	19.37	34.36	4.47	348	150	13.53	34.28	1.71	25.74	226	0.51
113	16.56	34.14	3.78	299	200	11.74	34.52	0.69	26.29	174	0.61
130	14.54	34.13	2.53	256	250	11.09	34.64	0.32	26.50	154	0.70
152	13.40	34.29	1.64	222	300	10.84	34.69	0.18	26.59	146	0.78
177	12.10	34.33	1.13	195	400	8.97	34.51	0.17	26.76	129	0.92
203	11.69	34.55	0.64	172	500	(7.57)	(34.41)	(0.21)	(26.90)	(116)	(1.05)
238	11.20	34.61	0.39	157							
290	10.96	34.70	0.18	147							
356	9.70	34.53	0.18	139							
421	8.64	34.51	0.17	125							
492	7.66	34.42	0.20	117							

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
80.52-O	II-14	1530	34°24.5'	120°36.0'	120	calm		cloudy	slight	14.03	33.51
87.50-O	17	0230	33°20.0'	119°39.5'	50	180°	7	drizzle	high	14.98	33.51
93.45-O	25	0830	32°21.0'	118°34.0'	900	280°	2	clear	moderate	15.21	33.47
93.55-O	25	1429	32°02.0'	119°15.0'	880	280°	2	clear	very rough	15.71	33.48
97.30-P	14	1147	32°15.5'	117°09.0'	27	020°	5	partly cloudy	slight	15.29	33.66
97.32-P	14	1037	32°11.5'	117°17.0'	700	340°	3	clear	moderate	15.47	33.71
97.35-P	14	0840	32°08.0'	117°28.5'	550	340°	4	clear	moderate	15.54	33.66
97.40-P	14	0538	31°57.0'	117°50.0'	850	340°	4	clear	moderate	15.52	33.60
97.45-P	14	0238	31°47.5'	118°09.5'	830	290°	4	partly cloudy	moderate	15.81	33.60
97.50-P	13	2344	31°36.5'	118°31.0'	1380	320°	4	partly cloudy	rough	15.78	33.58
97.55-P	13	2051	31°24.5'	118°50.0'	350	320°	4	partly cloudy	rough	15.87	33.66
97.70-P	13	1147	30°52.5'	119°50.5'	1960	330°	4	partly cloudy	moderate	15.18	33.51
97.80-P	13	0627	30°36.0'	120°32.0'	2100+	330°	4	partly cloudy	moderate	16.26	33.68
97.90-P	13	0032	30°16.5'	121°15.5'	2000+	340°	5	cloudy	very rough	16.51	33.71
100.29-P	11	0232	31°42.0'	116°43.5'	62	290°	3	clear	moderate	15.56	33.64
100.30-P	11	0311	31°40.5'	116°46.5'	232	320°	2	clear	moderate	15.66	33.59
100.35-P	11	0605	31°31.5'	117°07.5'	700	220°	2	partly cloudy	slight	16.17	33.68
100.40-P	11	0912	31°23.0'	117°28.0'	1040	200°	4	partly cloudy	rough	15.98	33.60
100.45-P	11	1209	31°13.5'	117°49.0'	1200	220°	5	drizzle	rough	16.06	33.60

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
100.50-P	II-11	1503	31°03.5'	118°09.5'	1040	200°	5	cloudy	very rough	16.17	33.67
100.55-P	11	1845	30°58.0'	118°22.5'	1150	220°	6	rain	very rough	16.26	33.69
100.70-P	12	0749	30°24.5'	119°27.5'	2000+	280°	4	partly cloudy	very rough	15.82	33.59
100.80-P	12	1316	30°04.5'	120°03.5'	1940	290°	4	fog	very rough	15.98	33.58
100.90-P	12	1832	29°44.0'	120°40.0'	2000+	320°	4	partly cloudy	very rough	16.28	33.60
103.30-P	10	1953	31°05.5'	116°25.5'	42	320°	2	clear	rough	15.88	33.65
103.35-P	10	1711	30°55.5'	116°45.0'	1020	330°	3	partly cloudy	rough	15.97	33.66
103.40-P	10	1430	30°46.0'	117°02.5'	1095	290°	3	partly cloudy	rough	16.46	33.71
103.45-P	10	1145	30°36.0'	117°24.5'	1350	340°	3	partly cloudy	moderate	16.50	33.73
103.50-P	10	0858	30°26.5'	117°44.5'	1440	340°	3	partly cloudy	moderate	16.48	33.73
103.55-P	10	0608	30°16.0'	118°05.0'	1450	330°	3	drizzle	rough	16.13	33.64
103.70-P	9	2045	29°56.0'	119°11.0'	2100	320°	5	partly cloudy	high	16.14	33.71
107.32-P	7	2015	30°26.0'	116°11.5'	410	calm		cloudy	slight	15.92	33.71
107.35-P	7	2240	30°19.5'	116°23.0'	990	140°	2	cloudy	moderate	16.60	33.64
107.40-P	8	0135	30°09.0'	116°42.0'	1650	270°	1	cloudy	slight	16.62	33.68
107.45-P	8	0417	29°58.5'	117°01.0'	1250	270°	3	partly cloudy	moderate	16.50	33.62
107.50-P	8	0707	29°48.0'	117°19.5'	1600	210°	2	cloudy	slight	16.88	33.76
107.55-P	8	0953	29°38.0'	117°38.5'	1800	calm		drizzle	slight	16.48	33.62
110.33-B	14	2105	29°50.5'	115°52.0'	50	320°	2	partly cloudy	slight	16.26	33.78

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
110.35-B	II-14	1925	29°46.5'	116°00.0'	570	320°	2	partly cloudy	moderate	16.06	33.82
110.40-B	14	1653	29°36.5'	116°19.5'	1180	320°	2	partly cloudy	moderate	16.24	33.79
110.45-B	14	1420	29°32.5'	116°39.0'	500	320°	3	partly cloudy	moderate	16.52	33.68
110.50-B	14	1205	29°19.5'	116°59.0'	1500	360°	3	clear	moderate	16.52	33.68
110.55-B	14	0915	29°07.0'	117°20.0'	2000	350°	3	missing	moderate	16.60	33.71
110.65-B	14	0330	26°46.5'	117°59.0'	1800	340°	3	missing	rough	17.28	33.86
110.80-B	13	1805	28°12.0'	118°59.0'	2065	320°	4	cloudy	rough	17.64	34.02
110.90-B	13	1311	27°56.5'	119°36.0'	2100	350°	4	cloudy	rough	17.80	34.05
113.30-B	15	0150	29°22.5'	115°17.5'	30	310°	4	partly cloudy	moderate	-	33.82
113.35-B	15	0415	29°12.0'	115°39.0'	640	320°	3	clear	moderate	-	33.78
113.40-B	15	0700	29°02.0'	115°58.5'	960	320°	4	clear	moderate	16.76	33.80
113.45-B	15	0945	28°52.0'	116°18.0'	1050	350°	3	clear	moderate	16.68	33.73
113.55-B	15	1615	28°28.0'	117°03.0'	2000	080°	2	overcast	moderate	17.02	33.82
113.65-B	15	2115	28°08.0'	117°43.0'	1850	140°	4	overcast	slight	17.18	33.86
113.70-B	15	2300	28°02.0'	117°55.5'	2000	150°	4	overcast	moderate	17.30	33.89
117.26-B	17	0935	28°56.0'	114°41.0'	1700	110°	2	overcast	slight	16.92	33.86
117.30-B	17	0745	28°48.0'	114°56.5'	54	090°	2	overcast	slight	-	33.98
117.35-B	17	0520	28°38.0'	115°16.0'	130	040°	3	overcast	slight	17.08	33.89
117.40-B	16	1835	28°28.0'	115°35.5'	480	040°	2	cloudy	slight	16.64	33.78

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
117.45-B	II-16	1555	28°18.0'	116°55.0'	2400	160°	1	overcast	slight	16.97	33.86
117.55-B	16	1150	28°03.0'	116°21.0'	2000	180°	3	overcast	moderate	17.19	33.95
117.60-B	16	0900	27°51.0'	116°45.0'	2000	180°	3	overcast	moderate	17.54	33.97
117.65-B	16	0610	27°39.0'	117°08.0'	1760	150°	3	overcast	moderate	17.66	33.97
117.70-B	16	0340	27°27.5'	117°32.5'	1780	160°	3	overcast	slight	17.50	33.96
118.39-B	16	1830	28°18.5'	115°24.0'	120	180°	1	cloudy	slight	17.16	33.91
119.33-B	17	1910	28°19.0'	114°53.0'	60	-	1	fog	slight	17.32	33.91
120.25-B	17	1420	28°23.0'	114°14.5'	30	-	1	overcast	smooth	16.96	33.89
120.30-B	17	1635	28°13.0'	114°34.0'	50	-	1	fog	slight	16.72	33.84
120.35-B	17	2105	28°03.0'	114°54.0'	45	-	1	overcast	slight	16.90	33.84
120.40-B	17	2320	27°56.5'	115°13.5'	21	290°	3	overcast	slight	16.98	33.91
120.45-B	18	0135	27°43.0'	115°33.0'	1100	260°	3	overcast	moderate	17.47	33.91
120.55-B	18	0705	27°23.0'	116°12.0'	2200	-	1	overcast	slight	18.68	34.06
120.60-B	18	0835	27°14.0'	116°31.5'	140	270°	3	fog	moderate	18.66	34.04
120.65-B	18	1220	27°04.5'	116°51.0'	2000	270°	5	missing	rough	18.50	34.02
120.70-B	18	1430	26°55.0'	117°10.5'	1900	300°	4	cloudy	rough	18.47	34.01
120.90-B	19	0030	26°13.0'	118°27.5'	2150	300°	3	cloudy	very rough	18.23	34.11
123.37-B	20	0530	27°24.0'	114°39.5'	40	360°	4	clear	rough	17.40	34.06
123.42-B	20	0320	27°17.0'	115°00.5'	650	340°	7	clear	very high	19.36	34.28

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.45-B	II-20	0115	27°08.0'	115°11.0'	2250	340°	7	partly cloudy	very high	18.18	34.02
123.50-B	19	2215	26°58.0'	115°30.5'	1850	330°	5	partly cloudy	very rough	18.20	34.00
123.55-B	19	1825	26°48.0'	115°49.5'	2176	330°	5	partly cloudy	very rough	18.62	34.07
123.60-B	19	1515	26°38.5'	116°09.0'	2000	360°	6	partly cloudy	very rough	18.72	34.14
127.34-B	20	2135	26°55.5'	114°06.0'	42	280°	3	cloudy	moderate	17.72	34.05
127.40-B	21	0045	26°43.5'	114°29.5'	1550	320°	5	partly cloudy	very rough	19.76	34.33
127.45-B	21	0330	26°33.5'	114°48.5'	1950	270°	4	partly cloudy	rough	19.55	34.34
127.50-B	21	0650	26°23.5'	115°08.0'	2250	270°	3	cloudy	rough	19.29	34.29
127.55-B	21	0925	26°13.0'	115°28.0'	1900	250°	3	cloudy	moderate	19.19	34.25
127.60-B	21	1155	26°02.0'	115°49.0'	2000	260°	3	cloudy	moderate	19.32	34.29
130.30-B	21	0905	26°29.0'	113°29.0'	42	080°	3	cloudy	moderate	18.08	34.09
130.35-B	22	0630	26°19.0'	113°48.5'	140	270°	3	cloudy	moderate	18.82	34.21
130.45-B	22	0120	25°59.0'	114°26.0'	1800	280°	3	drizzle	moderate	19.04	-
130.50-B	21	2245	25°49.0'	114°46.0'	1800	270°	2	overcast	moderate	19.24	34.20
130.55-B	21	1940	25°36.5'	115°05.0'	1980	270°	2	overcast	moderate	19.02	34.13
130.60-B	21	1645	25°22.0'	115°27.0'	2170	270°	3	overcast	moderate	18.83	34.09
133.25-B	22	1410	26°04.5'	112°48.0'	45	320°	5	cloudy	rough	17.86	34.22
133.30-B	22	1650	25°54.5'	113°07.5'	106	360°	5	cloudy	rough	19.00	34.32
133.35-B	23	0615	25°44.5'	113°26.5'	350	320°	5	cloudy	very rough	-	34.45

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
133.40-B	II-23	0920	25°34.5'	113°45.5'	1200	300°	7	cloudy	high	20.11	34.42
133.45-B	23	1200	25°27.0'	114°04.0'	1800	320°	5	partly cloudy	very rough	20.86	34.43
133.50-B	23	1455	25°19.0'	114°25.0'	1700	360°	6	cloudy	rough	21.50	34.51
134.36-B	23	0420	25°36.0'	113°23.0'	80	320°	5	cloudy	very rough	20.92	34.47
137.23-B	24	1020	25°39.0'	112°22.0'	40	350°	3	clear	moderate	18.18	34.28
137.30-B	24	0650	25°23.5'	112°47.0'	140	320°	4	partly cloudy	rough	19.96	34.35
137.35-B	24	0415	25°12.0'	113°06.0'	650	270°	4	cloudy	rough	21.37	34.57
137.45-B	23	2235	24°50.5'	113°42.0'	1700	350°	4	cloudy	rough	21.02	34.51
137.50-B	23	1955	24°50.0'	114°01.5'	2050	360°	4	partly cloudy	very rough	22.00	34.58

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; March 26, 1959; 1535 GCT; 33°34.5'N, 120°45'W; sounding, 625 fm; wind, 270°, force 7; weather, overcast; sea, very rough; wire angle, 10°. 83.60

3	15.22	33.58	5.62	311	0	(15.22)	(33.58)	(5.62)	(24.86)	(311)	(0.00)
13	15.22	33.60	5.59	309	10	15.22	33.60	5.60	24.87	309	0.03
33	15.24	33.57	5.58	313	20	15.22	33.59	5.59	24.86	310	0.06
63	15.24	33.57	5.62	313	30	15.23	33.58	5.58	24.84	312	0.09
73	14.28	33.55	5.17	294	50	15.24	33.57	5.60	24.83	313	0.16
88	10.88	33.60	3.90	227	75	13.80	33.55	4.95	25.14	284	0.23
103	10.08	33.68	3.59	208	100	10.26	33.66	3.66	25.88	213	0.29
118	9.47	33.75	3.50	194	150	9.13	33.86	2.87	26.22	181	0.39
143	9.24	33.83	2.99	184	200	8.17	34.01	2.25	26.49	155	0.48
163	8.88	33.89	2.70	174	250	7.54	34.11	1.69	26.66	139	0.55
192	8.29	33.98	2.34	158	300	6.98	34.16	1.17	26.79	127	0.62
221	7.94	34.07	1.97	147	400	6.34	34.26	0.59	26.95	112	0.74
251	7.53	34.11	1.68	138	500	5.81	34.32	0.44	27.07	100	0.86
300	6.98	34.16	1.17	127	600	5.34	34.38	0.32	27.16	91	0.96
355	6.60	34.22	0.74	118							
440	6.12	34.29	0.50	106							
525	5.68	34.34	0.40	98							
611	5.30	34.38	0.30	90							

STRANGER; March 12, 1959; 0505 GCT; 33°28'N, 117°47'W; sounding, 305 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 00°. 90.28

2	16.37	33.57	5.78	336	0	(16.37)	(33.57)	(5.78)	(24.59)	(336)	(0.00)
13	15.97	33.55	5.88	329	10	16.04	33.55	5.86	24.65	330	0.03
33	14.88	33.53	5.80	308	20	15.79	33.54	5.88	24.70	326	0.07
43	13.45	33.55	4.79	278	30	15.20	33.53	5.84	24.82	314	0.10
53	12.94	33.58	4.51	265	50	13.03	33.58	4.59	25.30	268	0.16
64	12.77	33.58	4.29	262	75	11.88	33.67	3.70	25.60	240	0.22
73	12.01	33.66	3.51	243	100	11.09	33.73	3.28	25.79	221	0.28
84	11.42	33.67	3.79	232	150	9.85	33.92	2.88	26.15	188	0.38
105	10.96	33.75	3.22	217	200	9.70	34.21	1.70	26.40	164	0.47
119	10.16	33.77	3.20	203	250	9.18	34.27	1.32	26.54	151	0.55
144	9.85	33.87	3.01	191	300	8.55	34.29	1.16	26.66	139	0.63
173	9.95	34.11	2.09	174	400	7.49	34.25	0.79	26.78	127	0.76
207	9.62	34.22	1.63	161	500	6.65	34.29	0.65	26.93	113	0.89
258	9.08	34.27	1.28	149							
306	8.48	34.29	1.13	138							
411	7.38	34.25	0.76	126							
513	6.56	34.29	0.62	112							
538	6.44	34.28	0.38	112							

STRANGER; March 12, 1959; 0705 GCT; 33°24.5'N, 117°55.5'W; sounding, 300 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 00°. 90.30

2	16.51	33.54	5.77	342	0	(16.51)	(33.54)	(5.77)	(24.53)	(341)	(0.00)
12	16.07	33.53	5.85	332	10	16.09	33.53	5.84	24.62	333	0.03
33	15.70	33.51	5.93	326	20	15.93	33.52	5.90	24.66	330	0.07
44	15.07	33.53	5.75	312	30	15.77	33.51	5.92	24.68	328	0.10
53	14.63	33.53	5.42	303	50	14.79	33.53	5.54	24.91	306	0.16
69	12.76	33.53	4.76	266	75	12.36	33.56	4.47	25.42	257	0.23
87	11.70	33.64	3.83	239	100	11.29	33.64	3.76	25.69	231	0.30
104	11.11	33.64	3.72	228	150	10.17	33.82	3.11	26.03	199	0.40
130	10.42	33.79	3.27	206	200	9.20	34.11	2.08	26.41	163	0.50
151	10.16	33.82	3.10	199	250	8.66	34.18	1.61	26.56	149	0.58
181	9.50	34.02	2.55	174	300	8.29	34.26	1.12	26.67	138	0.65
208	9.09	34.12	1.97	160	400	7.22	34.24	0.83	26.81	125	0.78
237	8.80	34.16	1.72	153	500	6.62	34.28	0.52	26.93	114	0.91
277	8.40	34.22	1.36	142							
332	8.10	34.29	0.87	133							
406	7.17	34.23	0.82	124							
482	6.73	34.28	0.56	115							
564	6.15	34.26	0.40	109							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
90.37	STRANGER; March 12, 1959; 1054 GCT; 33°10.5'N, 118°23.5'W; sounding, 630 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 03°.										
1	16.26	33.55	5.85	335	0	(16.26)	(33.55)	(5.85)	(24.60)	(335)	(0.00)
11	16.28	33.53	6.07	337	10	16.26	33.53	6.05	24.58	337	0.03
32	15.91	33.51	5.81	330	20	16.20	33.52	6.03	24.59	336	0.07
42	15.62	33.58	5.94	320	30	15.96	33.51	5.84	24.64	331	0.10
52	15.14	33.59	5.44	309	50	15.25	33.59	5.52	24.85	311	0.16
67	13.16	33.53	5.46	273	75	12.74	33.55	5.06	25.35	264	0.24
84	12.33	33.58	4.57	255	100	12.02	33.64	4.22	25.55	244	0.30
104	11.32	33.67	3.90	230	150	9.75	33.91	2.82	26.17	186	0.41
128	10.47	33.82	3.38	204	200	9.31	34.11	2.10	26.40	164	0.50
148	9.78	33.90	2.86	187	250	8.86	34.28	1.50	26.59	145	0.58
178	9.59	34.04	2.70	174	300	8.21	34.23	1.32	26.66	139	0.65
207	9.21	34.14	1.93	161	400	7.08	34.26	0.90	26.85	121	0.78
236	9.12	34.30	1.54	147	500	6.20	34.30	0.39	26.99	108	0.90
276	8.35	34.21	1.41	142							
335	8.06	34.27	1.15	134							
410	6.94	34.26	0.86	119							
485	6.30	34.29	0.41	109							
567	5.86	34.32	0.33	102							
90.45	STRANGER; March 12, 1959; 1457 GCT; 32°55.5'N, 118°56.5'W; sounding, 290 fm; wind, direction missing, force 1; weather, clear; sea, slight; wire angle, 00°.										
2	16.10	33.53	5.86	333	0	(16.10)	(33.53)	(5.86)	(24.62)	(333)	(0.00)
12	14.86	33.51	6.03	309	10	15.15	33.51	6.01	24.82	314	0.03
33	13.94	33.50	5.72	291	20	14.22	33.50	5.89	25.00	296	0.06
43	13.48	33.52	5.04	280	30	14.10	33.50	5.82	25.03	294	0.09
53	12.84	33.57	4.61	265	50	13.10	33.56	4.74	25.28	270	0.15
69	11.69	33.58	4.18	243	75	11.25	33.65	4.07	25.70	230	0.21
84	11.12	33.68	4.00	225	100	10.74	33.76	3.63	25.88	213	0.27
104	10.62	33.77	3.54	211	150	9.59	34.00	2.80	26.27	176	0.37
129	10.00	33.89	3.12	192	200	8.75	34.09	2.03	26.46	158	0.45
149	9.60	34.00	2.81	177	250	8.15	34.15	1.76	26.61	144	0.53
179	9.08	34.08	2.32	163	300	7.71	34.22	1.40	26.73	132	0.60
207	8.65	34.09	1.95	156	400	6.70	34.30	0.60	26.94	113	0.73
236	8.30	34.12	1.81	148	500	6.28	34.29	0.54	26.98	108	0.84
274	7.92	34.19	1.64	138							
333	7.44	34.25	1.14	127							
407	6.65	34.30	0.59	113							
481	6.38	34.29	0.56	110							
562	5.90	34.31	0.44	103							
90.50	STRANGER; March 12, 1959; 1754 GCT; 32°46.5'N, 119°18.5'W; sounding, 260 fm; wind, 250°, force 1; weather, clear; sea, slight; wire angle, 00°.										
2	15.88	33.55	5.88	327	0	(15.88)	(33.55)	(5.88)	(24.69)	(327)	(0.00)
13	15.40	33.51	6.04	320	10	15.48	33.51	6.02	24.74	321	0.03
33	14.70	33.51	5.91	305	20	15.19	33.51	6.03	24.81	315	0.06
53	13.86	33.51	5.52	289	30	14.81	33.51	5.95	24.88	308	0.10
80	12.08	33.55	4.66	252	50	14.21	33.51	5.70	25.01	296	0.16
104	10.58	33.64	4.02	219	75	12.41	33.54	4.82	25.39	259	0.22
129	9.92	33.75	3.50	200	100	10.86	33.62	4.17	25.74	226	0.29
168	9.26	34.00	2.41	172	150	9.54	33.90	2.90	26.19	183	0.39
207	8.82	34.09	1.98	159	200	8.89	34.08	2.03	26.44	160	0.48
260	8.50	34.18	1.54	147	250	8.58	34.17	1.64	26.56	149	0.56
306	7.96	-	1.43								
411	7.05	34.25	0.81	122							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

90.55

STRANGER; March 12, 1959; 2050 GCT; 32°37'N, 119°39.5'W; sounding, 540 fm; wind, 320°, force 1; weather, clear; sea, rough; wire angle, 05°.

1	16.10	33.57		330	0	(16.10)	(33.57)		(24.65)	(330)	(0.00)
11	15.78	33.56		324	10	15.80	33.56		24.71	325	0.03
32	15.54	33.55		320	20	15.66	33.56		24.74	322	0.06
56	15.06	33.51		313	30	15.57	33.55		24.75	320	0.10
66	15.00	33.51		312	50	15.18	33.52		24.82	314	0.16
76	14.50	33.51		301	75	14.63	33.51		24.92	305	0.24
91	12.84	33.51		269	100	11.60	33.53		25.55	245	0.31
106	11.28	33.55		237	150	9.65	33.75		26.06	196	0.42
130	10.73	33.63		223	200	8.79	33.94		26.35	169	0.51
150	9.65	33.75		196	250	8.24	34.09		26.55	149	0.60
174	9.12	33.86		180	300	7.59	34.16		26.70	135	0.67
203	8.75	33.95		168	400	6.92	34.30		26.90	116	0.80
232	8.52	34.07		155	500	6.28	34.33		27.01	106	0.92
272	7.88	34.12		142							
331	7.37	34.21		129							
406	6.89	34.31		115							
481	6.40	34.33		107							
563	5.96	34.33		102							

90.60

STRANGER; March 12, 1959; 2350 GCT; 32°25'N, 119°58'W; sounding, 500 fm; wind, 290°, force 1; weather, clear; sea, very rough; wire angle, missing.

1	17.09	33.64	5.78	347	0	(17.09)	(33.64)	(5.78)	(24.48)	(347)	(0.00)
11	16.45	33.64	5.88	333	10	16.47	33.64	5.87	24.62	333	0.03
32	16.18	33.66	5.89	325	20	16.20	33.65	5.89	24.68	327	0.07
58	15.71	33.64	4.94	317	30	16.19	33.66	5.89	24.70	326	0.10
68	14.06	33.56	4.98	289	50	15.80	33.64	5.02	24.78	318	0.16
78	12.68	33.62	4.49	258	75	13.01	33.61	4.61	25.34	265	0.24
93	11.58	33.59	4.29	240	100	11.17	33.60	4.21	25.68	232	0.30
108	10.75	33.61	4.14	225	150	9.68	33.82	3.30	26.10	192	0.41
132	10.06	33.71	3.71	206	200	8.58	33.99	2.60	26.42	162	0.50
151	9.66	33.82	3.29	192	250	7.97	34.09	1.90	26.59	146	0.58
176	9.11	33.90	3.03	177	300	7.50	34.15	1.61	26.70	135	0.65
205	8.48	34.00	2.50	160	400	6.49	34.22	1.09	26.90	117	0.78
234	8.14	34.07	2.01	150	500	6.07	34.25	0.69	26.97	109	0.90
273	7.72	34.12	1.77	140							
332	7.22	34.18	1.41	129							
407	6.43	34.22	1.05	116							
483	6.12	34.24	0.72	110							
565	5.84	34.32	0.53	101							

90.70

STRANGER; March 13, 1959; 0530 GCT; 32°05'N, 120°38'W; sounding, 2400 fm; wind, 290°, force 1; weather, clear; sea, very rough; wire angle, 25°.

2	15.56	33.36	5.89	334	0	(15.56)	(33.36)	(5.89)	(24.61)	(334)	(0.00)
11	15.53	33.35	5.90	334	10	15.53	33.35	5.90	24.61	334	0.03
31	15.26	33.35	5.94	328	20	15.42	33.35	5.92	24.63	332	0.07
53	14.66	33.42	6.08	311	30	15.27	33.35	5.94	24.66	329	0.10
62	14.44	33.44	5.76	305	50	14.85	33.41	6.05	24.80	316	0.16
71	13.74	33.37	5.86	296	75	13.15	33.33	5.80	25.10	288	0.24
84	11.99	33.30	5.63	268	100	10.65	33.48	5.00	25.68	232	0.31
97	10.83	33.46	5.11	237	150	9.11	33.73	3.77	26.12	190	0.41
120	9.78	33.58	4.31	211	200	8.51	33.92	3.27	26.38	166	0.58
137	9.22	33.69	3.83	194	250	7.71	34.03	2.50	26.58	147	0.58
160	9.06	33.75	3.60	187	300	7.23	34.09	1.82	26.69	136	0.66
187	8.67	33.88	3.45	172	400	6.22	34.17	0.88	26.89	117	0.79
214	8.36	33.95	3.10	162							
250	7.71	34.03	2.50	147							
304	7.19	34.09	1.78	135							
373	6.40	34.14	0.99	121							
445	6.04	34.22	0.74	111							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{3}^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3}^{-5} 10^{-5} cm/g	ΔD dyn. m

90.80 STRANGER; March 13, 1959; 1047 GCT; 31°44.5'N, 121°18'W; sounding, 2050 fm; wind, 290°, force 3; weather, clear; sea, rough; wire angle, 13°.

2	15.74	33.42	333	0	(15.74)	(33.42)		(24.62)	(333)	(0.00)
11	15.75	33.42	333	10	15.75	33.42		24.62	333	0.03
31	15.78	33.46	332	20	15.77	33.45		24.63	332	0.07
61	15.71	33.46	330	30	15.78	33.46		24.64	331	0.10
71	15.78	33.48	330	50	15.76	33.46		24.65	330	0.17
87	15.38	33.53	318	75	15.80	33.49		24.65	330	0.25
101	14.26	33.47	299	100	14.27	33.47		24.97	300	0.33
115	12.54	33.28	280	150	10.05	33.54		25.82	218	0.46
138	10.81	33.52	232	200	8.72	33.86		26.30	173	0.56
158	9.70	33.56	211	250	8.02	33.98		26.49	155	0.65
187	8.92	33.82	180	300	7.31	34.06		26.66	139	0.72
216	8.48	33.91	167							
244	8.10	33.97	157							
293	7.40	34.05	141							
346	6.78	34.11	128							
399p	6.20	34.16	117							
480p	5.71	34.28	103							
600p	5.36	34.31	96							

90.90 STRANGER; March 13, 1959; 1609 GCT; 31°24'N, 121°58.5'W; sounding, 2000+ fm; wind, 310°, force 5; weather, overcast; sea, very rough; wire angle, 16°.

3	16.00	33.53	331	0	(16.00)	(33.53)		(24.64)	(331)	(0.00)
13	16.00	33.57	328	10	16.00	33.56		24.67	328	0.03
33	16.02	33.55	330	20	16.01	33.55		24.66	329	0.06
				30	16.02	33.55		24.65	330	0.10

93.28 STRANGER; March 15, 1959; 2035 GCT; 32°55'N, 117°22'W; sounding, 270 fm; wind, 320°, force 1; weather, clear; sea, moderate; wire angle, 05°.

2	16.82	33.56	347	0	(16.82)	(33.56)		(24.47)	(347)	(0.00)
13	16.14	33.54	333	10	16.34	33.55		24.58	337	0.03
23	15.56	33.53	321	20	15.74	33.53		24.70	325	0.07
43	13.90	33.54	287	30	15.52	33.53		24.75	321	0.10
53	13.02	33.55	270	50	13.28	33.55		25.23	275	0.16
64	12.47	33.61	255	75	11.82	33.57		25.53	246	0.22
74	11.86	33.57	247	100	11.03	33.72		25.80	221	0.28
83	11.45	33.62	236	150	10.28	33.93		26.09	193	0.39
98	11.05	33.71	222	200	9.63	34.19		26.40	164	0.48
112	10.78	33.78	212	250	9.25	34.26		26.52	153	0.56
127	10.55	33.84	204	300	8.69	34.24		26.60	145	0.64
152	10.25	33.94	192	400	7.59	34.23		26.75	130	0.78
181	9.86	34.14	172	500	6.60	34.26		26.92	115	0.91
215	9.50	34.22	159							
263	9.14	34.26	150							
312	8.52	34.23	143							
416	7.42	34.23	128							
517	6.41	34.27	112							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

STRANGER; March 15, 1959; 1820 GCT; 32°46'N, 117°29.5'W; sounding, 340 fm; wind, 320°, force 1; weather, clear; sea, moderate; wire angle, 07°. 93.30

2	16.69	33.57	343	0	(16.69)	(33.57)	(24.52)	(343)	(0.00)
12	16.52	33.57	340	10	16.56	33.57	24.54	341	0.03
34	14.74	33.53	305	20	15.95	33.56	24.67	328	0.07
59	12.38	33.57	256	30	15.10	33.53	24.84	312	0.10
68	11.68	33.62	240	50	13.28	33.55	25.24	274	0.16
78	11.44	33.66	233	75	11.51	33.65	25.65	235	0.22
93	11.03	33.75	219	100	10.93	33.79	25.87	214	0.28
108	10.82	33.82	210	150	10.30	33.99	26.13	189	0.38
132	10.54	33.93	197	200	9.89	34.17	26.34	169	0.47
153	10.24	34.00	187	250	9.55	34.26	26.47	157	0.56
176	9.92	34.07	177	300	9.28	34.31	26.55	149	0.63
204	9.88	34.18	168	400	7.82	34.29	26.77	129	0.78
233	9.60	34.23	160	500	6.56	34.28	26.94	113	0.90
288p	9.44	34.31	152						
345p	8.56	34.28	140						
413p	7.66	34.29	127						
484p	6.72	34.27	116						
561p	6.06	34.33	103						

STRANGER; March 15, 1959; 1514 GCT; 32°38'N, 117°51'W; sounding, 310 fm; wind, 310°, force 1; weather, overcast; sea, moderate; wire angle, 05°. 93.35

2	16.72	33.58	343	0	(16.72)	(33.58)	(24.51)	(343)	(0.00)
12	16.50	33.60	337	10	16.54	33.60	24.57	338	0.03
33	15.72	33.55	324	20	16.22	33.59	24.63	332	0.07
44	15.50	33.54	320	30	15.82	33.56	24.70	325	0.10
54	14.56	33.54	300	50	14.91	33.54	24.89	307	0.16
69	13.22	33.54	274	75	12.71	33.53	25.34	264	0.23
84	12.10	33.53	254	100	11.46	33.60	25.62	238	0.30
104	11.38	33.62	234	150	10.35	33.89	26.05	197	0.41
128	10.63	33.74	213	200	9.78	34.21	26.40	164	0.50
148	10.38	33.88	198	250	9.29	34.31	26.55	150	0.58
177	9.78	34.07	174	300	8.65	34.33	26.67	138	0.66
208	9.78	34.24	162	400	7.50	34.31	26.83	123	0.79
237	9.46	34.29	153	500	6.70	34.30	26.94	113	0.91
276	8.95	34.33	142						
335	8.19	34.33	131						
409	7.42	34.31	122						
484	6.82	34.30	115						
566	6.09	34.31	105						

STRANGER; March 15, 1959; 1045 GCT; 32°30'N, 118°12.5'W; sounding, 1005 fm; wind, 310°, force 1; weather, clear; sea, moderate; wire angle, 04°. 93.40

2	16.64	33.61	340	0	(16.64)	(33.61)	(24.55)	(340)	(0.00)
13	16.64	33.62	339	10	16.64	33.62	24.56	339	0.03
33	15.66	33.51	325	20	16.60	33.62	24.57	338	0.07
43	15.48	33.53	320	30	15.74	33.51	24.69	326	0.10
58	15.06	33.51	313	50	15.33	33.52	24.79	317	0.16
73	13.88	33.50	289	75	13.73	33.50	25.10	287	0.24
100	11.54	33.55	243	100	11.54	33.55	25.57	243	0.31
120	10.68	33.65	220	150	9.91	33.77	26.03	199	0.42
140	10.20	33.72	207	200	9.21	33.98	26.31	172	0.51
159	9.66	33.82	191	250	8.59	34.16	26.55	149	0.60
190	9.28	33.94	176	300	8.25	34.25	26.66	139	0.67
223	9.08	34.09	162	400	7.02	34.27	26.86	120	0.80
253	8.54	34.17	148	500	6.35	34.28	26.96	111	0.92
302	8.24	34.25	138	600	5.92	34.31	27.04	103	1.04
356	7.56	34.29	125						
441	6.64	34.25	116						
526	6.23	34.29	108						
613	5.85	34.31	102						

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T} 10^{-5} cm^3/g	ΔD dyn. m
93.50	STRANGER; March 15, 1959; 0050 GCT; 32°04.5'N, 118°51'W; sounding, 530 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 27°.										
9	15.66	33.52		324	0	15.7	(33.53)		(24.71)	(325)	(0.00)
27	15.64	33.49a)		326	10	15.66	33.52		24.72	324	0.03
36	15.40	33.51		320	20	15.65	33.52		24.70	326	0.06
50	14.44	33.49		302	30	15.60	33.49		24.70	326	0.10
65	13.44	-			50	14.44	33.49		24.95	302	0.16
87	12.08	33.53		253	75	12.82	33.51		25.29	269	0.23
104	11.24	33.60		234	100	11.45	33.58		25.61	239	0.30
121	10.24	33.66		213	150	9.69	33.82		26.10	192	0.40
139	9.87	33.76		199	200	8.89	34.00		26.38	166	0.49
164	9.46	33.93		180	250	8.42	34.15		26.57	148	0.58
194	8.92	33.97		169	300	7.99	34.13		26.62	143	0.65
220	8.80	34.10		157	400	6.97	34.24		26.85	121	0.79
264	8.24	34.15		146	500	6.31	34.28		26.97	109	0.91
313	7.88	34.12		142							
389	7.03	34.24		122							
468	6.52	34.26		114							
549	5.96	34.33		102							
93.60	STRANGER; March 14, 1959; 1750 GCT; 31°45.5'N, 119°33'W; sounding, 2000+ fm; wind, 320°, force 7; weather, cloudy; sea, very rough; wire angle, 12°.										
5	15.74	33.53		(327)	0	15.8	(33.53)		(24.69)	(327)	(0.00)
15	15.74	33.52		326	10	15.74	33.52		24.70	326	0.03
40	15.76	33.51		327	20	15.75	33.52		24.69	327	0.06
70	13.59	33.39		292	30	15.76	33.52		24.69	327	0.10
80	12.44	33.46		266	50	15.15	33.47		24.78	318	0.16
101	10.93	33.51		235	75	13.07	33.41		25.17	281	0.24
116	10.05	33.69		207	100	11.00	33.51		25.64	236	0.30
130	9.96	33.70		205	150	9.29	33.75		26.11	191	0.41
160	8.96	33.78		184	200	8.50	34.00		26.44	160	0.50
180	8.62	33.90		170	250	8.10	34.10		26.58	147	0.58
211	8.42	34.04		156	300	7.65	34.18		26.70	135	0.65
245	8.16	34.09		148	400	7.00	34.23		26.84	122	0.78
272	7.86	34.14		141	500	6.31	34.26		26.95	111	0.91
324	7.52	34.20		131	600	5.60	34.31		27.08	99	1.02
388	7.08	34.23		123							
487	6.40	34.25		113							
579	5.73	34.30		101							
655	5.26	34.34		93							
93.70	STRANGER; March 14, 1959; 1119 GCT; 31°27'N, 120°13.5'W; sounding, 2000+ fm; wind, 320°, force 7; weather, overcast; sea, very rough; wire angle, 29°.										
1	15.32	33.35		330	0	(15.32)	(33.35)		(24.65)	(330)	(0.00)
10	15.32	33.33		331	10	15.32	33.33		24.64	331	0.03
33	15.35	33.37		329	20	15.33	33.35		24.65	330	0.07
60	14.71	33.35		317	30	15.34	33.37		24.66	329	0.10
69	14.48	33.35		312	50	15.38	33.39		24.67	328	0.16
87	13.66	33.60		278	75	14.31	33.38		24.90	306	0.24
101	12.72	33.64		257	100	12.80	33.64		25.40	259	0.32
114	11.91	33.64		242	150	9.49	33.68		26.03	199	0.43
142	9.69	33.61		207	200	8.44	33.95		26.41	163	0.52
161	9.22	33.76		189	250	7.72	34.00		26.56	149	0.60
188	8.62	33.91		169	300	7.12	34.07		26.69	136	0.68
220	8.16	33.99		156	400	6.54	34.20		26.88	118	0.81
248	7.74	34.00		149	500	5.78	34.25		27.01	106	0.93
295	7.18	34.06		137	600	5.31	34.32		27.13	95	1.03
357	6.84	34.16		126							
451	6.16	34.23		111							
537	5.56	-									
611	5.28	34.33		94							

a) Salinity bottle numbers from 27 to 139 meters, inclusive, were listed out of order on the data sheet; present order is assumed to be correct, but these salinity data must be considered doubtful.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
STRANGER; March 14, 1959; 0340 GCT; 31°08.5'N, 120°54.5'W; sounding, 2000+ fm; wind, 340°, force 7; weather, clear; sea, very rough; wire angle, 25°.											93.80
2	15.70	33.40		334	0	(15.70)	(33.40)		(24.61)	(334)	(0.00)
12	15.70	33.39		335	10	15.70	33.39		24.60	335	0.03
35	15.70	33.44		331	20	15.70	33.41		24.62	333	0.07
63	15.96	33.58		326	30	15.70	33.43		24.63	332	0.10
73	15.98	33.49		334	50	15.81	33.50		24.66	329	0.17
91	15.14	33.73		298	75	15.98	33.48		24.62	333	0.25
104	14.76	33.75		289	100	14.89	33.75		25.05	292	0.33
118	13.95	33.66		279	150	11.18	33.64		25.71	229	0.46
147	11.43	33.62		236	200	9.14	33.74		26.14	188	0.57
167	10.26	33.74		207	250	8.30	33.97		26.44	160	0.66
194	9.28	33.73		192	300	7.41	34.06		26.65	140	0.73
228	8.64	33.88		171	400	6.63	34.16		26.83	123	0.87
256	8.20	33.98		157	500	6.00	34.24		26.98	109	0.99
303	7.35	34.07		139	600	5.48					
364	6.88	34.12		129							
459	6.25	34.22		114							
545	5.72	34.25		105							
620	5.42	-									
STRANGER; March 13, 1959; 2111 GCT; 30°50'N, 121°35'W; sounding, 2000+ fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 26°.											93.90
1	16.10	33.53	5.76	333	0	(16.10)	(33.53)	(5.76)	(24.62)	(333)	(0.00)
10	16.09	33.53	5.65	333	10	16.09	33.53	5.65	24.62	333	0.03
29	15.96	33.53	5.66	330	20	16.01	33.53	5.66	24.64	331	0.07
57	16.18	33.64	5.93	327	30	15.96	33.53	5.67	24.66	329	0.10
67	16.20	33.68	5.93	325	50	16.14	33.62	5.89	24.68	328	0.16
81	16.20	33.67	5.79	325	75	16.20	33.67	5.88	24.71	325	0.25
94	16.12	33.85	5.68	310	100	13.98	33.69	5.53	25.21	277	0.32
108	13.53	33.66	5.48	271	150	10.38	33.58	4.63	25.80	220	0.45
131	11.80	33.58	5.01	245	200	9.02	33.78	3.72	26.18	185	0.55
150	10.38	33.58	4.63	220	250	8.42	33.91	3.10	26.38	166	0.64
178	9.51	33.56	4.15	208	300	7.61	34.00	2.38	26.57	148	0.72
205	8.95	33.81	3.63	181	400	6.56	34.10	1.33	26.79	127	0.87
234	8.68	33.87	3.33	173	500	5.98	34.13	0.58	26.97	110	0.99
281	7.88	33.99	2.59	152							
333	7.22	34.02	2.01	141							
413	6.43	34.11	1.23	124							
496	6.00	34.22	0.59	111							
579	5.46	34.29	0.54	99							
ORCA; March 12, 1959; 0050 GCT;[a] 32°11.5'N, 117°17.5'W; sounding; 732 fm; wind, 070°, force 4; weather, clear; sea, rough; wire angle, 19°.											97.32
416	-	34.32[b]	0.62								
426	7.31	34.31	0.73	120							
436	7.26	34.31	0.65	120							
445	7.26	34.33	0.70	118							
455	7.14	34.34	0.55	116							
464	7.05	34.34	0.50	115							
474	6.86	34.34	0.46	113							
483	6.74	34.33	0.46	112							
493	6.64	34.33	0.43	110							
503	6.58	34.34	0.37	108							
512	6.52	34.34	0.37	108							
522	6.40	34.34	0.37	106							
531	6.32	34.36	0.33	104							
541	6.26	34.34	0.30	104							
552	6.15	34.34	0.29	103							
562	6.10	34.36	0.33	101							
571	6.06	34.35	0.32	102							
580	6.03	34.34	0.30	102							

a) Test cast.

b) Salinity bottle number was not recorded on the data sheet. Since standard handling and titrating procedures were used, this salinity value is assumed to be listed correctly.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T}{}^{-5}{}_{3}$	Z	T	S	O_2	σ_t	$\delta_{T}{}^{-5}{}_{3}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

97.60 PAOLINA-T; March 22, 1959; 0112 GCT; 31°14.5'N, 119°08'W; sounding, 1900 fm; wind, 270°, force 4; weather, cloudy; sea, very rough; wire angle, 18°.

2	16.58	33.73	5.66	329	0	(16.58)	(33.73)	(5.66)	(24.66)	(329)	(0.00)
12	16.59	33.68	5.70	333	10	16.59	33.68	5.70	24.62	332	0.03
31	16.46	33.70	5.53	328	20	16.53	33.68	5.64	24.64	331	0.07
60	16.24	33.66	5.68	327	30	16.46	33.70	5.54	24.66	329	0.10
70	15.58	33.57	5.76	319	50	16.40	33.70	5.55	24.67	328	0.16
83	14.18	33.55	5.23	292	75	15.14	33.56	5.63	24.86	311	0.24
98	12.38	33.58	4.49	255	100	12.30	33.59	4.45	25.46	253	0.32
113	11.81	33.64	4.31	241	150	10.05	33.73	3.56	25.98	204	0.43
137	10.56	33.65	3.94	218	200	8.82	34.00	2.45	26.39	165	0.53
157	9.84	33.78	3.36	198	250	8.33	34.20	1.67	26.62	143	0.60
185	9.12	33.95	2.66	173	300	7.76	34.28	1.26	26.77	129	0.68
213	8.60	34.04	2.23	159	400	6.83	34.27	0.68	26.89	117	0.80
242	8.40	34.14	1.82	148	500	6.24	34.33	0.50	27.02	105	0.92
290	7.87	34.29	1.29	130	600	(5.59)	(34.43)	(0.33)	(27.18)	(90)	(1.02)
342	7.38	34.24	0.90	127							
425	6.60	34.29	0.61	113							
508	6.21	34.34	0.47	104							
593	5.64	34.42	0.33	92							

100.60 PAOLINA-T; March 21, 1959; 1957 GCT; 30°45'N, 118°46'W; sounding, 1780 fm; wind, 270°, force 3; weather, partly cloudy; sea, rough; wire angle, 14°.

1	16.81	33.69	5.81	338	0	(16.81)	(33.69)	(5.81)	(24.57)	(338)	(0.00)
11	16.70	33.69	5.65	335	10	16.71	33.69	5.69	24.60	335	0.03
31	16.66	33.71	5.42	332	20	16.68	33.70	5.55	24.62	333	0.07
41	16.26	33.66	5.42	327	30	16.67	33.71	5.43	24.62	332	0.10
56	15.51	33.57	5.47	318	50	16.00	33.63	5.44	24.72	324	0.17
71	14.48	33.57	5.31	296	75	14.05	33.58	5.18	25.10	288	0.24
96	11.96	33.61	4.34	245	100	11.65	33.62	4.22	25.60	239	0.31
116	10.94	33.66	3.83	224	150	9.68	33.76	3.38	26.06	196	0.42
136	10.24	33.68	3.80	211	200	8.81	33.94	2.63	26.35	169	0.51
155	9.52	33.79	3.23	191	250	7.99	34.06	2.30	26.56	149	0.59
184	8.96	33.89	2.89	176	300	7.56	34.19	1.54	26.72	133	0.67
218	8.62	34.01	2.31	161	400	6.85	34.27	0.61	26.89	118	0.80
247	8.04	34.05	2.31	150	500	6.15	34.34	0.47	27.03	104	0.91
294	7.60	34.19	1.57	134	600	(5.54)	(34.37)	(0.29)	(27.14)	(94)	(1.02)
346	7.28	34.17	1.08	131							
428	6.62	34.30	0.52	112							
512	6.08	34.34	0.47	103							
596	5.56	34.37	0.29	94							

103.60 PAOLINA-T; March 19, 1959; 1414 GCT; 30°16.5'N, 118°28.5'W; sounding, 1700 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°.

2	16.50	33.71	5.80	329	0	(16.50)	(33.71)	(5.80)	(24.66)	(329)	(0.00)
12	16.52	33.71	5.53	329	10	16.51	33.71	5.55	24.66	329	0.03
32	16.52	33.69	5.45	331	20	16.52	33.70	5.49	24.65	330	0.07
42	16.52	33.72	5.43	329	30	16.52	33.69	5.46	24.64	331	0.10
57	16.00	33.65	5.37	322	50	16.29	33.70	5.40	24.70	325	0.16
72	15.46	33.57	5.12	317	75	15.30	33.56	5.12	24.82	314	0.24
97	13.42	33.53	5.08	279	100	13.24	33.54	5.04	25.24	274	0.32
118	12.11	33.59	4.86	250	150	10.15	33.62	4.26	25.87	214	0.44
137	10.90	33.58	4.60	229	200	8.88	33.87	3.05	26.28	175	0.54
156	9.86	33.65	4.07	207	250	8.02	34.02	2.18	26.52	152	0.62
185	9.14	33.81	-	184	300	7.40	34.10	1.80	26.68	138	0.70
218	8.56	33.93	2.77	166	400	6.51	34.15	0.97	26.84	122	0.84
247	8.05	34.01	2.22	153	500	6.11	34.31	0.40	27.02	105	0.95
294	7.49	34.09	1.85	140	600	(5.54)	(34.34)	(0.32)	(27.12)	(96)	(1.06)
347	6.90	34.12	1.39	129							
428	6.38	34.17	0.77	119							
515	6.02	34.33	0.39	103							
597	5.56	34.34	0.32	96							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m	
PAOLINA-T; March 18, 1959; 0945 GCT; 29°32'N, 118°01'W; sounding, 1830 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 17°.												107.60
1	17.30	33.85	5.50	336	0	(17.30)	(33.85)	(5.50)	(24.59)	(336)	(0.00)	
11	17.30	33.86	5.31	336	10	17.30	33.86	5.31	24.59	336	0.03	
30	17.26	33.87	5.36	334	20	17.32	33.87	5.33	24.60	335	0.07	
59	16.98	33.85	5.38	329	30	17.26	33.87	5.36	24.61	334	0.10	
68	17.11	33.92	5.40	327	50	17.00	33.85	5.38	24.66	330	0.17	
82	17.20	33.93	5.30	328	75	17.20	33.93	5.33	24.67	328	0.25	
95	16.98	33.95	5.21a)	322	100	17.28	33.91	5.25	24.86	310	0.33	
110	15.08	33.82	5.31	290	150	11.79	33.68	4.03	25.63	237	0.47	
134	12.83	33.71	4.80	254	200	9.58	33.80	3.53	26.11	191	0.58	
153	11.52	33.68	3.90	232	250	8.68	34.00	2.76	26.41	163	0.66	
181	10.06	33.71	3.82	206	300	8.00	34.11	2.23	26.60	145	0.75	
209	9.40	33.84	-	186	400	7.05	34.22	1.12	26.82	124	0.88	
235	8.92	33.95	2.94	170	500	6.40	34.34	0.46	27.00	107	1.01	
281	8.19	34.08	2.42	150								
332	7.76	34.15	1.91	138								
410	6.95	34.24	0.98	121								
492	6.45	34.34	0.47	107								
575	5.95	34.34	0.39	101								
ORCA; March 13, 1959; 2315 GCT; 28°55.5'N, 117°38'W; sounding, 2000 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 26°.												110.60
2	17.16	33.78	5.66	338	0	(17.16)	(33.78)	(5.66)	(24.56)	(338)	(0.00)	
11	17.12	33.77	5.50	338	10	17.13	33.77	5.50	24.56	338	0.03	
30	16.94	33.80	5.44	332	20	17.06	33.79	5.45	24.60	336	0.07	
57	16.10	33.62	5.54	326	30	16.94	33.80	5.44	24.63	332	0.10	
66	16.01	33.64	5.51	324	50	16.19	33.64	5.50	24.68	327	0.17	
80	15.92	33.60	5.56	324	75	15.96	33.62	5.54	24.72	324	0.25	
94	15.54	33.78	5.46	303	100	14.50	33.72	5.22	25.12	286	0.33	
108	13.35	33.66	4.97	268	150	10.05	33.73	4.08	25.98	204	0.45	
129	11.44	33.69	4.46	231	200	9.66	34.16	1.67	26.38	166	0.54	
147	10.10	33.70	4.27	208	250	8.68	34.21	1.50	26.58	147	0.62	
173	9.91	33.96	2.38	185	300	8.16	34.25	1.21	26.69	136	0.70	
200	9.66	34.16	1.67	166	400	7.43	34.33	0.65	26.85	121	0.83	
226	9.04	34.18	1.68	155	500	6.62	34.36	0.47	26.99	108	0.95	
270	8.43	34.25	1.30	141								
320	7.98	34.26	1.12	133								
396	7.46	34.33	0.68	121								
477	6.82	34.36	0.45	110								
558	6.14	34.35	0.53	102								
ORCA; March 15, 1959; 1455 GCT; 28°23.5'N, 117°14.5'W; sounding, 1960 fm; wind, 310°, force 4; weather, overcast; sea, very rough; wire angle, missing.												113.60
2	17.22	33.81	5.76	338	0	(17.22)	(33.81)	(5.76)	(24.56)	(338)	(0.00)	
11	17.22	33.81	5.65	338	10	17.22	33.81	5.64	24.56	338	0.03	
30	17.23	33.82	5.54	338	20	17.22	33.81	5.59	24.56	338	0.07	
59	16.80	33.73	5.50	334	30	17.23	33.82	5.54	24.57	338	0.10	
68	16.72	33.71	5.24	334	50	16.90	33.74	5.51	24.60	335	0.17	
83	16.56	33.72	5.32	329	75	16.66	33.71	5.27	24.63	332	0.25	
97	15.81	33.73	5.33	313	100	15.45	33.72	5.28	24.91	306	0.33	
111	13.46	33.63	4.89	272	150	10.75	33.66	3.99	25.80	221	0.46	
134	11.25	33.66	4.40	230	200	9.50	33.92	2.63	26.21	182	0.56	
153	10.66	33.66	3.91	220	250	8.92	34.15	1.99	26.49	155	0.65	
180	9.80	33.87	3.12	190	300	8.36	34.24	1.46	26.65	140	0.73	
209	9.38	33.95	2.34	177	400	7.55	34.33	0.53	26.84	122	0.86	
237	9.08	34.12	2.10	160	500	6.48	34.34	0.26	27.00	107	0.98	
284	8.49	34.21	1.65	144	600	(5.92)	(34.38)		(27.10)	(98)	(1.09)	
336	8.10	34.31	0.95	131								
417	7.40	34.34	0.43	120								
499	6.49	34.34	0.26	108								
582	6.00	34.38	0.20	99								

a) Alternate value, 5.38 ml/L, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
117.50	ORCA; March 17, 1959; 0023 GCT; 28°08.5'N, 116°15.5'W; sounding, 2500 fm; wind, 350°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.										
0	17.27	33.73	5.42	344	0	17.27	33.73	5.42	24.50	344	0.00
10	17.10	33.71	5.50	342	10	17.10	33.71	5.50	24.52	342	0.03
29	16.90	33.71	5.69	338	20	16.99	33.71	5.63	24.55	340	0.07
60	16.62	33.78	5.62	326	30	16.89	33.71	5.69	24.57	338	0.10
71	16.14	33.77	5.18	316	50	16.74	33.76	5.65	24.64	330	0.17
86	14.92	33.77	4.40	290	75	15.80	33.77	4.93	24.87	309	0.25
101	13.78	33.80	3.70	265	100	13.90	33.80	3.76	25.30	268	0.32
116	12.37	33.75	3.64	243	150	11.18	33.99	2.35	25.98	204	0.44
141	11.34	33.93	2.52	211	200	11.08	34.36	1.07	26.29	174	0.54
161	11.08	34.08	2.10	196	250	9.76	34.34	1.21	26.50	154	0.62
190	11.10	34.30	1.20	180	300	9.00	34.35	1.11	26.63	142	0.70
220	10.96	34.47	0.90	164	400	8.00	34.37	0.52	26.80	126	0.84
250	9.76	34.34	1.21	154	500	6.82	34.37	0.43	26.97	110	0.96
298	9.01	34.35	1.12	142	600	5.99	34.40	0.39	27.10	97	1.07
351	8.48	34.34	0.79	135							
435	7.62	34.39	0.41	119							
519	6.58	34.38	0.45	106							
609	5.95	34.40	0.38	96							
120.50	ORCA; March 18, 1959; 1245 GCT; 27°32'N, 115°52'W; sounding, 2000+ fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 16°.										
1	17.20	33.88	5.62a)	332	0	(17.20)	(33.88)	(5.62)	(24.63)	(332)	(0.00)
10	17.22	33.86	5.11	334	10	17.22	33.86	5.11	24.61	334	0.03
30	17.14	33.84	5.50	333	20	17.20	33.85	5.41	24.61	334	0.07
40	15.58	33.80	4.48	302	30	17.14	33.84	5.50	24.62	333	0.10
50	14.27	33.77	3.76	278	50	14.27	33.77	3.76	25.20	278	0.16
63	13.26	33.87	3.40	250	75	12.37	33.95	2.84	25.72	228	0.22
78	12.26	33.96	2.73	225	100	11.50	34.08	1.96	26.00	202	0.28
96	11.94	34.06	2.21	212	150	11.40	34.32	1.27	26.19	184	0.38
119	11.45	34.14	1.81	198	200	10.46	34.41	0.94	26.44	160	0.46
138	11.45	34.29	1.37	186	250	9.73	34.40	1.10	26.55	150	0.54
166	11.27	34.35	1.11	179	300	9.39	34.44	0.79	26.65	140	0.62
183	10.72	34.42	0.95	164	400	8.16	34.42	0.32	26.82	124	0.76
222	10.16	34.39	0.92	157	500	7.09	34.40	0.38	26.96	111	0.88
259	9.61	34.40	1.05	148							
316	9.30	34.47	0.62	138							
390	8.28	34.43	0.31	125							
464	7.49	34.40	0.41	116							
544	6.62	34.41	0.28	104							
120.80	ORCA; March 19, 1959; 0425 GCT; 26°33.5'N, 117°47.5'W; sounding, 2000+ fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 07°.										
1	18.57	34.11	5.70a)	347	0	(18.57)	(34.11)	(5.70)	(24.47)	(347)	(0.00)
11	18.58	34.09	5.55	348	10	18.58	34.09	5.55	24.46	348	0.03
32	18.51	34.13	5.58	344	20	18.55	34.10	5.54	24.47	347	0.07
62	17.94	33.99	5.69	341	30	18.52	34.13	5.57	24.50	344	0.10
212b)	10.14	34.25	1.75	167	50	18.50	34.13	5.58	24.50	344	0.17
241	9.78	34.31	1.43	157							
292	8.89	34.30	1.18	144							
347	8.14	34.34	0.73	130							
434	7.20	34.37	0.35	115							
520	6.48	34.34	0.48	108							
607	5.90	34.40	0.35	96							

a) On Stations 120.50 and 120.80 the station number appears to be reversed on the oxygen sheets; the data are now assumed to be listed correctly.

b) Pretrip; depth too uncertain for interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
ORCA; March 20, 1959; 1255 GCT; 27°14'N, 115°00'W; sounding, 500 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 10°.											123.42
2	17.50	33.98	5.90	332	0	(17.50)	(33.98)	(5.90)	(24.63)	(332)	(0.00)
11	17.52	33.93	5.90	335	10	17.51	33.93	5.90	24.60	335	0.03
31	17.50	33.93	5.86	335	20	17.51	33.93	5.89	24.60	335	0.07
57	16.48	33.84	5.62	319	30	17.50	33.93	5.87	24.60	335	0.10
66	14.97	33.78	5.41	291	50	17.26	33.92	5.81	24.64	332	0.17
77	14.02	33.77	5.10	273	75	14.18	33.78	5.15	25.23	275	0.24
92	12.99	33.66	4.69	260	100	12.33	33.68	4.04	25.52	247	0.31
105	12.54	33.78	3.84	244	150	10.99	34.14	2.20	26.12	190	0.42
130	11.36	33.95	2.72	210	200	10.63	34.43	0.93	26.42	162	0.51
150	10.99	34.14	2.20	190	250	10.05	34.49	0.60	26.56	148	0.59
173	11.01	34.30	1.42	178	300	9.41	34.48	0.50	26.66	139	0.66
201	10.62	34.43	0.92	162	400	8.05	34.43	0.31	26.84	122	0.80
230	10.30	34.48	0.64	153	500	6.91	34.40	0.26	26.98	108	0.92
268	9.83	34.49	0.58	144							
326	9.06	34.47	0.42	134							
399	8.06	34.43	0.31	122							
474	7.14	34.41	0.28	111							
554	6.45	34.40	0.24	102							
ORCA; March 22, 1959; 0328 GCT; 26°07.5'N, 114°07'W; sounding, 1100 fm; wind, direction missing, force 1; weather, overcast; sea, moderate; wire angle, 17°.											130.40
0	18.84	34.15	5.35	351	0	18.84	34.15	5.35	24.43	351	0.00
9	18.80	34.14	5.80u	350	10	18.79	34.14		24.44	350	0.04
29	18.60	34.13	5.20	346	20	18.69	34.14		24.46	348	0.07
53	18.32	34.09	5.16	342	30	18.59	34.13	5.19	24.48	346	0.10
62	16.58	33.86	5.14	319	50	18.35	34.09	5.16	24.52	343	0.17
73	15.80	33.77	5.15	309	75	15.48	33.76	5.14	24.92	304	0.25
86	14.06	33.74	5.00	275	100	12.55	33.73	4.11	24.52	247	0.32
100	12.55	33.73	4.11	247	150	11.67	34.21	1.74	26.06	196	0.44
122	12.00	33.91	3.11	224	200	10.91	34.43	0.87	26.38	166	0.53
141	11.70	34.13	2.08	202	250	10.30	34.52	0.50	26.55	150	0.61
164	11.64	34.34	1.28	186	300	9.58	34.51	0.34	26.66	139	0.68
192	11.04	34.42	0.94	170	400	8.26	34.48	0.21	26.84	122	0.82
221	10.62	34.50	0.69	156	500	7.43	34.48	0.09	26.97	110	0.94
261	10.18	34.52	0.43	148							
315	9.36	34.51	0.32	135							
387	8.35	34.47	0.22	123							
460	7.86	34.49	0.13	115							
540	6.96	34.45	0.06	105							
ORCA; March 23, 1959; 1935 GCT; 24°58'N, 113°25'W; sounding, 1500 fm; wind, 340°, force 2; weather, cloudy; sea, moderate; wire angle, 15°.											137.40
2	19.64	34.31	5.54	359	0	(19.64)	(34.31)	(5.54)	(24.34)	(359)	(0.00)
11	19.52	34.32	5.55	355	10	19.53	34.32	5.55	24.38	355	0.04
31	19.27	34.37	5.53	345	20	19.41	34.34	5.55	24.43	351	0.07
61	19.16	34.38	5.45	341	30	19.28	34.37	5.54	24.49	345	0.11
71	18.78	34.28	5.44	340	50	19.18	34.38	5.46	24.52	342	0.17
85	17.73	34.10	5.44	328	75	18.72	34.27	5.44	24.56	339	0.26
100	15.50	33.90	4.31	293	100	15.50	33.90	4.31	25.04	293	0.34
115	13.52	33.90	3.31	253	150	11.87	34.11	2.23	25.94	207	0.46
138	12.34	34.10	2.36	216	200	10.85	34.38	1.24	26.34	170	0.56
157	11.62	34.11	2.17	203	250	10.38	34.55	0.52	26.56	149	0.64
186	11.01	34.30	1.55	178	300	9.73	34.54	0.37	26.66	139	0.72
214	10.70	34.46	0.90	161	400	8.42	34.50	0.27	26.84	122	0.85
243	10.48	34.54	0.54	151	500	7.17	34.43	0.18	26.97	110	0.97
291	9.85	34.54	0.40	141	600	(6.19)	(34.45)	(0.15)	(27.12)	(96)	(1.08)
345	9.14	34.54	0.27	130							
427	8.02	34.47	0.26	119							
510	7.06	34.43	0.17	109							
594	6.24	34.45	0.15	96							

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
83.40-P	III-26	0015	34°14.0'	119°22.0'	12	280°	3	partly cloudy	moderate	14.12	33.58
83.43-P	26	0155	34°08.0'	119°34.0'	142	280°	4	partly cloudy	rough	14.24	33.59
83.51-P	26	0740	33°52.0'	120°07.5'	66	240°	8	partly cloudy	very rough	13.11	33.64
87.35-P	24	1635	33°50.0'	118°37.5'	430	260°	3	clear	rough	15.22	33.59
87.40-P	27	1745	33°40.0'	118°58.5'	465	340°	3	clear	very rough	15.44	33.58
87.45-P	27	2045	33°34.5'	119°26.5'	100	340°	5	clear	very rough	14.60	33.58
87.50-P	28	0235	33°23.0'	119°38.0'	63	290°	8	clear	very high	14.48	33.58
90.65-S	13	0230	32°15.0'	120°16.0'	2000	290°	2	clear	very rough	16.69	33.58
93.45-S	15	0630	32°20.0'	118°33.0'	980	320°	2	clear	moderate	16.29	33.58
93.55-S	14	2130	31°55.0'	119°12.0'	550	320°	6	cloudy	very rough	15.65	33.51
97.30-P	22	1910	32°16.0'	117°09.0'	30	300°	1	partly cloudy	moderate	16.08	33.54
97.32-P	22	1758	32°12.0'	117°16.0'	780	-	1	partly cloudy	moderate	16.74	33.57
97.35-P	22	1540	32°03.0'	117°27.0'	690	340°	2	cloudy	moderate	17.14	33.70
97.40-P	22	1235	31°53.0'	117°48.0'	830	200°	4	cloudy	rough	16.89	33.70
97.45-P	22	1000	31°43.0'	118°08.5'	840	290°	4	cloudy	very rough	16.56	33.62
97.50-P	22	0705	31°34.0'	118°29.0'	1480	280°	4	cloudy	very rough	16.58	33.61
97.55-P	22	0410	31°23.5'	118°49.0'	650	300°	4	cloudy	very rough	16.51	33.66

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
100.29-P	III-21	0125	31°42.0'	116°43.5'	68	310°	2	cloudy	moderate	15.50	33.57
100.30-P	21	0235	31°40.5'	116°46.5'	235	310°	2	cloudy	moderate	16.10	33.58
100.35-P	21	0535	31°30.0'	117°08.0'	500	290°	2	cloudy	moderate	16.86	33.61
100.40-P	21	0850	31°19.5'	117°29.5'	650	300°	2	cloudy	moderate	16.87	33.65
100.45-P	21	1200	31°08.0'	117°50.5'	1000	300°	3	overcast	moderate	16.72	33.64
100.50-P	21	1431	30°58.0'	118°13.0'	950	300°	2	partly cloudy	rough	16.45	33.62
100.55-P	21	1700	30°51.0'	118°30.0'	1150	270°	3	partly cloudy	rough	16.61	33.66
103.30-P	20	1855	31°04.0'	116°23.5'	30	-	1	overcast	moderate	15.04	33.55
103.35-P	20	1542	30°52.5'	116°43.5'	970	340°	1	overcast	slight	16.66	33.69
103.40-P	20	1242	30°43.5'	117°05.0'	990	320°	1	partly cloudy	moderate	16.74	33.71
103.45-P	19	2235	30°39.0'	117°23.5'	1230	340°	4	overcast	rough	17.00	33.70
103.50-P	19	2025	30°33.5'	117°42.5'	1200	340°	4	overcast	rough	17.12	33.80
103.55-P	19	1720	30°26.5'	118°02.0'	1770	340°	4	overcast	rough	17.18	33.82
103.70-P	19	0835	29°52.5'	119°05.0'	1850	340°	5	cloudy	very rough	15.99	33.45
103.80-P	19	0310	29°28.0'	119°45.0'	2180	320°	5	partly cloudy	rough	16.84	33.46
107.32-P	17	1625	30°25.5'	116°11.0'	230	-	1	overcast	moderate	16.00	33.64
107.35-P	17	1845	30°19.5'	116°21.0'	1070	-	1	overcast	slight	16.72	33.66

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
107.40-P	III-17	2135	30°09.0'	116°45.0'	1510	280°	2	overcast	moderate	16.84	33.66
107.45-P	18	0030	29°59.5'	117°02.5'	1180	280°	2	overcast	moderate	16.99	33.66
107.50-P	18	0324	29°50.5'	117°21.5'	1450	280°	2	cloudy	moderate	16.89	33.62
107.55-P	18	0625	29°41.5'	117°42.5'	1970	360°	3	partly cloudy	rough	16.96	33.68
107.70-P	18	1505	29°12.0'	118°40.5'	2000+	300°	4	cloudy	rough	17.42	33.86
107.80-P	18	2025	28°52.5'	119°23.5'	2000	280°	4	partly cloudy	rough	17.32	33.75
110.33-O	14	1630	29°50.5'	115°52.0'	50	300°	3	overcast	rough	16.26	33.68
110.35-O	14	1510	29°46.5'	116°00.0'	750	110°	4	overcast	rough	16.74	33.68
110.40-O	14	1115	29°35.5'	116°18.5'	1335	330°	4	partly cloudy	rough	16.48	33.68
110.45-O	14	0820	29°25.5'	116°39.0'	500	330°	4	cloudy	very rough	16.36	33.62
110.50-O	14	0525	29°15.5'	116°59.0'	1925	320°	6	cloudy	high	16.86	33.66
110.55-O	14	0230	29°03.5'	117°19.0'	2000	330°	5	partly cloudy	very rough	16.94	33.68
110.65-O	13	2010	28°46.0'	117°56.5'	2000	320°	3	clear	moderate	17.04a)	33.79
110.70-O	13	1740	28°36.0'	118°18.0'	1750	330°	2	clear	moderate	17.14	33.78
110.80-O	13	1245	28°18.0'	118°55.0'	2000	300°	2	partly cloudy	rough	17.46	33.86

a) Alternate value, 17.32°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
110.90-O	III-13	0750	27°59.0'	119°33.0'	2080	300°	2	partly cloudy	rough	17.64	33.89
113.30-O	14	2125	29°22.5'	115°18.0'	30	300°	3	partly cloudy	rough	15.09	33.83
113.35-O	15	0015	29°12.5'	115°38.0'	500	290°	5	overcast	very rough	16.76	33.68
113.40-O	15	0300	29°02.5'	115°57.5'	975	290°	5	overcast	very rough	17.26	33.85
113.45-O	15	0555	28°52.5'	116°17.0'	1100	290°	4	overcast	very rough	17.03	33.82
113.50-O	15	0835	28°42.5'	116°36.5'	2400	300°	5	overcast	very rough	16.97	33.68
113.55-O	15	1130	28°33.0'	116°56.0'	1850	300°	5	overcast	very rough	17.04	33.71
113.65-O	15	1825	28°12.5'	117°35.0'	2000	320°	2	overcast	rough	17.26	33.77
113.70-O	15	2135	28°02.0'	117°54.5'	2000	320°	2	cloudy	rough	17.62	33.89
113.80-O	16	0240	27°42.5'	118°38.5'	2000	320°	4	partly cloudy	very rough	17.96	34.00
117.26-O	17	1630	28°56.0'	114°40.5'	48	-	1	overcast	slight	16.36	33.77
117.30-O	17	1435	28°48.0'	114°56.5'	55	360°	2	cloudy	slight	16.96	33.83
117.35-O	17	1150	28°38.0'	115°16.0'	125	300°	2	clear	moderate	16.41	33.66
117.40-O	17	0650	28°28.0'	115°35.5'	400	020°	3	partly cloudy	rough	17.17	33.82
117.45-O	17	0335	28°18.0'	115°55.0'	1780	350°	4	partly cloudy	rough	17.22	33.76
117.55-O	16	2105	27°57.5'	116°34.0'	1900+	350°	4	clear	rough	17.51	33.84
117.60-O	16	1825	27°47.5'	116°53.5'	2100	350°	4	clear	very rough	17.52	33.84

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
117.65-O	III-16	1455	27°42.5'	117°22.5'	2000+	360°	5	clear	very rough	17.81	33.99
117.70-O	16	1210	27°31.5'	117°39.5'	2000	330°	2	partly cloudy	rough	17.78	33.97
117.80-O	16	0715	27°08.5'	118°12.5'	2100	360°	2	partly cloudy	rough	18.22	34.04
118.39-O	17	0900	28°19.0'	115°24.5'	178	020°	2	partly cloudy	rough	16.80	33.73
119.33-O	18	0200	28°19.0'	114°53.0'	62	300°	3	overcast	moderate	17.38	33.86
120.25-O	17	2135	28°23.0'	114°15.0'	28	360°	3	overcast	moderate	16.90	33.82
120.30-O	18	0000	28°13.0'	114°34.0'	50	360°	3	overcast	moderate	16.78	33.80
120.35-O	18	0430	28°03.0'	114°54.0'	47	320°	2	overcast	rough	17.08	33.83
120.40-O	18	0640	27°56.5'	115°14.0'	22	320°	3	overcast	rough	16.86	33.80
120.45-O	18	0925	27°43.0'	115°33.0'	1180	320°	3	overcast	rough	17.10	33.82
120.55-O	18	1555	27°21.5'	116°11.5'	2000	300°	4	clear	rough	16.90	33.75
120.60-O	18	1855	27°11.0'	116°30.5'	2000	300°	5	clear	very rough	17.94	34.02
120.65-O	18	2105	27°00.0'	116°51.0'	2000+	320°	5	clear	very rough	17.90	33.96
120.70-O	18	2335	26°49.0'	117°10.0'	2000+	320°	5	clear	very rough	17.92	33.87
120.90-O	19	1010	26°13.0'	118°27.5'	2000+	320°	5	partly cloudy	very rough	18.60	34.49
123.37-O	20	1555	27°24.0'	114°40.0'	38	320°	4	overcast	rough	17.42a)	33.98

a) Alternate value, 16.76°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.45-O	III-20	1045	27°08.5'	115°10.5'	2000	320°	4	overcast	rough	17.80	34.00
123.50-O	20	0750	26°58.5'	115°30.0'	1990	320°	4	overcast	rough	17.16	33.79
123.55-O	20	0530	26°48.5'	115°50.5'	2000	340°	3	overcast	rough	17.20	33.81
123.60-O	20	0215	26°36.0'	116°09.0'	2000+	320°	3	cloudy	very rough	17.53	33.87
127.34-O	20	2035	26°55.5'	114°06.0'	39	140°	3	overcast	moderate	17.30	34.05
127.40-O	20	2343	26°43.0'	114°29.0'	-	270°	4	cloudy	rough	17.94	33.98
127.45-O	21	0255	26°32.0'	114°48.5'	2000	290°	2	cloudy	rough	18.64	34.15
127.50-O	21	0515	26°23.0'	115°08.0'	2000+	330°	5	overcast	rough	18.78	34.18
127.55-O	21	0820	26°13.0'	115°27.5'	2000+	330°	3	overcast	rough	18.69	34.20
127.60-O	21	1100	26°03.5'	115°47.0'	2000+	320°	3	clear	moderate	18.76	34.21
130.30-O	22	0855	26°29.0'	113°28.5'	42	-	1	cloudy	moderate	18.43	34.18
130.35-O	22	0600	26°18.5'	113°48.5'	210	-	1	overcast	slight	18.34	34.22
130.45-O	22	0025	25°57.5'	114°26.0'	2000+	290°	2	overcast	moderate	18.92	34.16
130.50-O	21	2140	25°48.0'	114°45.0'	2000+	-	1	cloudy	moderate	19.29	34.23
130.55-O	21	1900	25°39.0'	115°02.5'	2000	-	1	cloudy	moderate	19.77	34.34
130.60-O	21	1605	25°27.0'	115°23.0'	2100	320°	3	cloudy	moderate	19.76	34.36
133.25-O	22	1410	26°03.0'	112°45.5'	44	-	1	cloudy	smooth	19.38	34.35

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
133.30-O	III-22	1710	25°55.0'	113°07.5'	104	210°	1	partly cloudy	slight	19.02	34.22
133.35-O	23	0035	25°44.5'	113°26.5'	360	-	1	partly cloudy	smooth	18.33	34.14
133.40-O	23	0330	25°34.5'	113°45.0'	1500	260°	1	clear	smooth	20.04	34.40
133.45-O	23	0610	25°24.5'	114°04.5'	2000+	260°	2	cloudy	moderate	19.55a)	34.29
133.50-O	23	0900	25°14.5'	114°24.0'	2000+	270°	3	overcast	moderate	20.74	34.33
134.36-O	22	2310	25°38.5'	113°26.0'	78	-	1	partly cloudy	calm	18.50	34.19
137.23-O	24	0615	25°33.5'	112°18.5'	41	290°	5	clear	rough	20.02	34.39
137.30-O	24	0210	25°19.5'	112°46.0'	268	290°	5	clear	rough	19.72	34.31
137.35-O	23	2330	25°09.0'	113°05.5'	600	320°	3	partly cloudy	rough	19.16	34.21
137.45-O	23	1625	24°49.0'	113°43.0'	1400	340°	3	overcast	moderate	21.03	34.56
137.50-O	23	1400	24°40.5'	114°00.0'	2000+	340°	2	overcast	moderate	21.61	34.61

a) Alternate value, 19.73°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

STRANGER; April 24, 1959; 1425 GCT; 37°37'N, 123°37'W; sounding, 1750 fm; wind, 170°, force 2; weather, overcast; sea, moderate; wire angle, 10°. 60.60

2	10.95	33.45	6.18	240	0	(10.95)	(33.45)	(6.18)	(25.60)	(240)	(0.00)
12	10.90	33.46	5.99	238	10	10.92	33.46	6.00	25.62	238	0.02
31	9.92	33.75	5.51	200	20	10.20	33.65	5.66	25.88	212	0.05
41	9.56	33.73	5.22	196	30	9.97	33.75	5.54	26.01	201	0.07
51	9.39	33.77	5.76u	190	50	9.40	33.76		26.10	192	0.11
65	9.24	33.82	4.92	185	75	9.20	33.84	4.82	26.20	182	0.15
80	9.16	33.85	4.79	181	100	9.01	33.86	3.95	26.24	178	0.20
100	9.01	33.86	3.95	178	150	8.41	33.96	2.26	26.42	162	0.28
124	8.66	33.93	2.37	168	200	7.89	34.00	1.88	26.53	152	0.36
144	8.46	33.95	2.29	164	250	7.52	34.08	1.71	26.65	140	0.44
173	8.18	34.03	2.08	153	300	7.00	34.10	1.46	26.73	132	0.51
203	7.84	34.00	1.85	151	400	6.30	34.20	0.79	26.90	116	0.64
233	7.72	34.08	1.74	143	500	5.74	34.22	0.59	26.99	107	0.75
271	7.18	34.09	1.67	135							
330	6.82	34.14	1.15	127							
405	6.27	34.20	0.78	116							
479	5.84	34.22	0.62	109							
558	5.50	34.23	0.42	104							

STRANGER; April 24, 1959; 1955 GCT; 37°14'N, 124°16'W; sounding, 2100 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 07°. 60.70

2	12.85	33.22	6.38	290	0	(12.85)	(33.22)	(6.38)	(25.06)	(290)	(0.00)
12	12.20	33.25	6.40	276	10	12.28	33.24	6.40	25.19	278	0.03
32	12.06	33.29	6.11	271	20	12.11	33.28	6.18	25.26	272	0.06
61	11.22	33.28	5.66	257	30	12.07	33.29	6.12	25.27	271	0.08
71	10.62	33.38	4.92	240	50	12.05	33.29	6.08	25.28	270	0.14
86	9.97	33.48	4.42	221	75	10.40	33.42	4.73	25.67	233	0.20
101	9.54	33.61	4.00	205	100	9.55	33.61	4.01	25.96	205	0.26
116	9.27	33.71	3.54	194	150	8.90	33.88	2.74	26.28	175	0.35
141	9.02	33.84	2.85	180	200	8.12	34.02	2.11	26.52	153	0.43
160	8.70	33.91	2.61	170	250	7.46	34.09	1.76	26.66	139	0.51
190	8.28	34.00	2.18	158	300	7.09	34.09	1.47	26.72	134	0.58
219	7.87	34.05	2.04	148	400	6.28	34.14	0.74	26.86	120	0.71
250	7.46	34.09	1.76	139	500	5.76	34.17	0.65	26.94	112	0.83
299	7.10	34.09	1.48	134	600	5.25	34.24	0.61	27.06	101	0.94
354	6.58	34.22u	1.06								
438	6.08	34.16	0.62	116							
522	5.63	34.18	0.65	109							
608	5.21	34.24	0.60	100							

STRANGER; April 25, 1959; 0052 GCT; 36°54'N, 125°02.5'W; sounding, 2275 fm; wind, direction missing, force 1; weather, cloudy; sea, rough; wire angle, 13°. 60.80

3	13.25	33.06	6.21	310	0	(13.25)	(33.06)	(6.21)	(24.86)	(310)	(0.00)
13	12.54	33.09	6.21	294	10	12.80	33.07	6.21	24.96	300	0.03
32	11.52	33.23	6.38	266	20	12.40	33.10	6.22	25.06	291	0.06
41	11.16	33.28	6.17	256	30	11.53	33.23	6.38	25.32	266	0.09
51	11.03	33.31	6.10	252	50	11.04	33.31	6.11	25.47	252	0.14
66	10.73	33.36	5.96	242	75	10.72	33.36	5.95	25.58	242	0.20
81	10.44	33.43	5.66	233	100	9.76	33.62	4.13	25.94	208	0.26
100	9.76	33.62	4.13	208	150	8.41	33.82	3.77	26.31	172	0.35
124	9.16	33.75	3.28	189	200	7.98	33.93	2.77	26.46	158	0.44
142	8.51	33.78	3.81	176	250	7.22	33.96	2.87	26.59	146	0.52
170	8.24	33.91	3.41	164	300	6.40	33.96	2.53	26.70	135	0.59
198	8.00	33.93	2.77	158	400	5.58	34.00	1.59	26.84	122	0.72
227	7.62	33.97	2.76	150	500	5.59	34.18	0.52	26.98	108	0.84
264	6.93	33.96	2.99	141							
322	6.12	33.96	2.30	131							
397	5.58	34.00	1.59	122							
470	5.72	34.16	0.78	112							
550	5.14	34.18	0.14	104							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

60.90 STRANGER; April 25, 1959; 0548 GCT; 36°37'N, 125°47'W; sounding, 2430 fm; wind, direction missing, force 1; weather, missing; sea, rough; wire angle, 04°.

2	13.74	32.87	6.03	333	0	(13.74)	(32.87)	(6.03)	(24.62)	(333)	(0.00)
12	13.46	32.92	5.71	324	10	13.47	32.92	5.72	24.71	324	0.03
32	12.34	32.92	6.09	303	20	13.38	32.92	5.73	24.74	322	0.06
61	11.96	33.04	5.04	287	30	12.60	32.92	6.04	24.88	308	0.10
72	10.97	33.10	5.35	266	50	12.08	33.00	5.37	25.04	292	0.16
87	9.97	33.36	5.16	230	75	10.30	33.25	5.32	25.56	244	0.22
101	9.32	33.45	4.31	214	100	9.39	33.44	4.36	25.86	214	0.28
116	8.96	33.51	4.10	204	150	8.48	33.72	3.83	26.22	180	0.38
142	8.58	33.66	3.90	186	200	7.73	33.94	3.40	26.50	154	0.47
161	8.35	33.80	3.74	173	250	6.96	33.98	2.95	26.65	140	0.54
190	7.90	33.93	3.50	157	300	6.15	33.96	1.99	26.74	132	0.61
221	7.38	33.96	3.17	148	400	5.35	34.00	1.47	26.87	119	0.74
250	6.96	33.98	2.95	140	500	5.04	34.13	0.66	27.01	106	0.86
300	6.15	33.96	1.99	132	600	4.62	34.24	0.38	27.14	94	0.96
355	5.54	33.95	1.96	126							
441	5.22	34.07	0.99	113							
526	4.95	34.16	0.57	103							
611	4.56	34.25	0.35	92							

63.52 STRANGER; April 24, 1959; 0850 GCT; 37°19'N, 122°36.5'W; sounding, 45 fm; wind, 180°, force 2; weather, overcast; sea, moderate; wire angle, 00°.

2	11.39	33.39	7.34	251	0	(11.39)	(33.39)	(7.34)	(25.48)	(251)	(0.00)
12	11.42	33.38	7.60	253	10	11.42	33.38	7.60	25.46	253	0.02
32	10.18	33.66	5.01	212	20	11.13	33.48	6.80	25.59	240	0.05
52	9.39	33.78	3.30	190	30	10.30	33.64	5.25	25.86	215	0.07
					50	9.45	33.77	3.49	26.10	192	0.11

63.60 STRANGER; April 24, 1959; 0450 GCT; 37°03.5'N, 123°10'W; sounding, 1275 fm; wind, 180°, force 2; weather, overcast; sea, moderate; wire angle, 15°.

2	12.93	33.44	5.77	276	0	(12.93)	(33.44)	(5.77)	(25.22)	(276)	(0.00)
12	12.62	33.42	6.02	272	10	12.67	33.42	6.01	25.26	272	0.03
30	12.24	33.40	5.94	266	20	12.58	33.42	6.02	25.27	271	0.05
54	11.96	33.40	5.93	260	30	12.24	33.40	5.94	25.32	266	0.08
64	10.14	33.58	4.25	217	50	11.96	33.40	5.93	25.38	261	0.13
74	9.70	33.68	3.52	202	75	9.69	33.68	3.52	26.00	202	0.19
88	9.38	33.68	3.55	197	100	9.20	33.77	3.05	26.14	188	0.24
102	9.16	33.78	2.95	186	150	8.49	33.94	2.30	26.40	164	0.33
125	8.88	33.86	2.48	176	200	7.89	34.00	1.84	26.53	151	0.41
144	8.58	33.93	2.33	166	250	7.34	34.08	1.49	26.67	138	0.48
166	8.27	33.96	2.19	160	300	6.78	34.08	1.10	26.75	130	0.55
192	7.96	33.98	1.90	154	400	6.15	34.14	0.74	26.88	118	0.68
220	7.72	34.05	1.71	146	500	5.64	34.19	0.53	26.98	109	0.80
257	7.27	34.08	1.45	137							
313	6.66	34.08	1.06	130							
383	6.23	34.13	0.78	120							
456	5.88	34.16	0.68	114							
535	5.44	34.22	0.36	104							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta^{-5}T_3$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta^{-5}T_3$ 10^{-5} cm/g	ΔD dyn. m	

STRANGER; April 25, 1959; 1042 GCT; 36°02'N, 125°21'W; sounding, 2430 fm; wind, 180°, force 1; weather, overcast; sea, rough; wire angle, 05°. 63.90

3	14.93	33.26		328	0	(14.93)	(33.26)		(24.67)	(328)	(0.00)
13	14.59	33.28		320	10	14.65	33.28		24.74	321	0.03
33	14.46	33.30		316	20	14.52	33.30		24.78	317	0.06
43	14.37	33.28		315	30	14.48	33.30		24.80	316	0.10
52	14.47	33.33		314	50	14.45	33.32		24.82	314	0.16
68	14.67	33.51		305	75	14.47	33.51		24.95	301	0.24
82	13.76	33.46		290	100	11.45	33.19		25.30	268	0.31
103	11.12	33.16		264	150	8.82	33.66		26.12	190	0.42
126	9.64	33.47		217	200	8.31	33.92		26.40	164	0.51
146	8.90	33.64		193	250	7.62	33.96		26.54	150	0.59
177	8.51	33.83		173	300	6.89	33.96		26.64	141	0.67
206	8.24	33.93		162	400	5.86	34.01		26.82	124	0.80
235	7.90	33.97		154	500	4.98	34.08		26.97	109	0.93
274	7.27	33.96		146							
336	6.41	33.96		135							
410	5.78	34.02		123							
483	5.06	34.06		112							
566	4.84	34.18		101							

STRANGER; April 23, 1959; 2053, 2117 GCT; 36°41'N, 122°27.5'W; sounding, 1070 fm; wind, 210°, force 2; weather, cloudy; sea, moderate; wire angle, 04°, 09°. 67.55

2	11.98	33.55	7.19	250	0	(11.98)	(33.55)	(7.19)	(25.49)	(250)	(0.00)
12	10.84	33.57	5.42	230	10	10.90	33.54	5.62	25.68	232	0.02
31	10.65	33.60	4.99	224	20	10.72	33.59	5.11	25.75	226	0.05
41	10.61	33.62	4.92	222	30	10.66	33.60	5.00	25.77	224	0.07
52	10.54	33.64	4.48	218	50	10.57	33.64	4.66	25.81	220	0.11
67	9.84	33.67	3.49	206	75	9.59	33.72	3.06	26.05	197	0.17
82	9.45	33.75	2.88	193	100	9.17	33.84	2.50	26.21	182	0.21
102	9.12	33.86	2.48	180	150	8.44	33.94	2.22	26.40	164	0.30
127	8.81	33.91	2.46	172	200	8.11	34.04	1.78	26.52	152	0.38
146	8.48	33.93	2.28	166	250	7.73	34.09	1.33	26.62	143	0.46
176	8.26	34.00	1.86	157	300	7.36	34.12	1.14	26.70	135	0.53
205	8.07	34.04	1.76	152	400	6.61	34.20	0.72	26.86	120	0.66
234	7.86	34.07	1.40	146	500	6.05	34.22	0.63	26.96	111	0.78
275	7.54	34.12	1.26	138							
334	7.12	34.14	0.96	131							
409	6.54	34.20	0.70	118							
484	6.15	34.22	0.65	112							
564	5.60	34.23	0.42	105							

STRANGER; April 23, 1959; 2345 GCT; 36°29'N, 122°45.5'W; sounding, 1595 fm; wind, 220°, force 2; weather, cloudy; sea, moderate; wire angle, missing. 67.60

3	14.23	33.41		304	0	(14.23)	(33.41)		(24.93)	(304)	(0.00)
13	12.94	33.40		278	10	12.96	33.40		25.18	279	0.03
33	12.66	33.40		274	20	12.93	33.40		25.19	278	0.06
43	12.18	33.37		267	30	12.70	33.40		25.24	274	0.08
53	11.74	33.44		254	50	12.11	33.37		25.33	266	0.14
68	10.37	33.59		220	75	10.13	33.63		25.88	213	0.20
83	9.90	33.66		207	100	9.29	33.70		26.08	195	0.25
104	9.18	33.71		192	150	8.69	33.87		26.30	173	0.34
127	8.82	33.82		179	200	8.38	33.98		26.44	160	0.43
149	8.70	33.87		173	250	8.02	34.08		26.57	148	0.50
178	8.46	33.95		164	300	7.49	34.12		26.68	136	0.58
207	8.35	34.00		158	400	6.59	34.18		26.84	122	0.71
237	8.12	34.06		150	500	5.88	34.22		26.97	109	0.83
277	7.74	34.11		141							
338	7.06	34.14		130							
412	6.50	34.18		120							
488	5.96	34.22		110							
568	5.48	34.25		102							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m
67.90	STRANGER; April 25, 1959; 1530 GCT; 35°29'N, 124°56'W; sounding, 2408 fm; wind, 270°, force 3; weather, fog; sea, rough; wire angle, 10°.										
4	14.11	32.94	4.20	335	0	14.3	(32.94)	(4.20)	(24.56)	(339)	(0.00)
14	13.88	32.99	5.52	327	10	13.96	32.96	5.08	24.65	330	0.03
33	13.83	33.03	5.28	324	20	13.85	33.02	5.30	24.72	324	0.07
44	13.91	33.06	5.82	322	30	13.84	33.02	5.30	24.72	324	0.10
59	13.79	33.08	5.79	318	50	13.89	33.07	5.82	24.75	321	0.16
73	13.48	33.01	5.35a)	318	75	13.45	33.02	5.36	24.79	317	0.24
98	13.30	33.26	5.69	296	100	13.23	33.27	5.68	25.03	294	0.32
117	11.78	33.31	5.42	264	150	9.93	33.45	5.03	25.78	223	0.45
137	10.76	33.37	5.42	242	200	8.66	33.81	4.48	26.26	177	0.55
156	9.68	33.48	4.91	217	250	7.94	33.92	3.98	26.46	158	0.64
184	8.80	33.74	4.59	184	300	7.23	33.96	2.63	26.58	146	0.72
221	8.52	33.88	4.33	170	400	5.82	33.98	1.72	26.79	127	0.86
250	7.94	33.92	3.98	158	500	5.25	34.06	0.86	26.92	114	0.98
300	7.23	33.96	2.63	146	600	4.98	34.17	0.52	27.04	102	1.10
355	6.22	33.96	2.35	132							
440	5.59	34.00	1.28	122							
524	5.16	34.09	0.75	110							
608	4.98	34.18	0.49	102							
70.52	STRANGER; April 23, 1959; 1239 GCT; 36°07.5'N, 121°50'W; sounding, 370 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 13°.										
3	12.28	33.49	5.89	260	0	(12.28)	(33.49)	(5.89)	(25.38)	(260)	(0.00)
13	12.17	33.49	5.99	258	10	12.22	33.49	5.95	25.40	259	0.03
32	10.69	33.57	4.53	226	20	11.80	33.61	5.43	25.57	242	0.05
41	10.14	33.60	3.81	216	30	11.15	33.58	4.96	25.66	234	0.07
51	10.04	33.58	3.77	216	50	10.05	33.58	3.81	25.85	216	0.12
66	9.51	33.64	3.51	202	75	9.20	33.68	3.40	26.07	195	0.17
80	9.20	33.68	3.40	195	100	8.97	33.80	3.40	26.20	182	0.22
101	8.96	33.80	3.40	182	150	8.74	33.91	2.60	26.33	170	0.31
123	8.96	33.83	2.75	180	200	8.17	33.98	2.01	26.47	157	0.39
144	8.80	33.88	2.63	174	250	7.80	34.11	1.54	26.63	142	0.47
172	8.44	33.97	2.43	162	300	7.47	34.16	1.29	26.71	134	0.54
201	8.16	33.98	2.00	157	400	6.69	34.22	0.82	26.87	119	0.67
229	7.98	34.07	1.69	147	500	5.79	34.19	0.58	26.96	110	0.79
267	7.66	34.13	1.44	139							
324	7.34	34.17	1.20	132							
399	6.70	34.22	0.83	119							
472	5.96	34.18	0.63	113							
553	5.56	34.23	0.45	104							
70.60	STRANGER; April 23, 1959; 0806 GCT; 35°53'N, 122°22.5'W; sounding, 1550 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.										
3	12.50	33.51	5.80	262	0	(12.50)	(33.51)	(5.80)	(25.36)	(262)	(0.00)
13	12.48	33.50	5.96	263	10	12.49	33.50	5.92	25.36	263	0.03
58	10.11	33.62	3.67	213	20	(12.47)	(33.50)	(5.95)	(25.36)	(262)	(0.05)
67	9.93	33.63	3.35	210	30	(12.44)	(33.50)	(5.94)	(25.36)	(262)	(0.08)
77	9.50	33.72	3.07	196	50	(12.00)	(33.50)	(5.59)	(25.45)	(254)	(0.13)
92	9.30	33.81	2.70	186	75	9.59	33.69	3.14	26.02	200	(0.19)
107	9.12	33.84	2.55	182	100	9.22	33.82	2.62	26.19	184	(0.24)
132	8.78	33.95	2.33	168	150	8.53	33.98	2.05	26.42	162	(0.32)
151	8.51	33.98	2.04	162	200	7.85	34.04	1.79	26.57	148	(0.40)
175	8.18	34.02	1.92	154	250	7.56	34.10	1.40	26.65	140	(0.47)
205	7.80	34.05	1.72	146	300	7.12	34.16	1.06	26.76	129	(0.54)
234	7.72	34.07	1.50	144	400	6.32	34.19	0.70	26.90	116	(0.67)
272	7.30	34.13	1.30	134	500	5.59	34.22	0.46	27.02	105	(0.78)
329	6.94	34.18	0.86	125							
405	6.27	34.19	0.69	116							
479	5.70	34.21	0.50	108							
560	5.38	34.29	0.36	98							

a) Alternate value, 6.01 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

STRANGER; April 23, 1959; 0248 GCT; 35°33'N, 123°06'W; sounding, 2100 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 03°. 70.70

4	13.94	33.32	6.10	304	0	14.1	(33.32)	(6.10)	(24.89)	(307)	(0.00)
14	13.52	33.28	6.08	298	10	13.63	33.29	6.09	24.96	300	0.03
34	13.46	33.33	6.01	294	20	13.51	33.30	6.05	25.00	297	0.06
59	12.87	33.42	5.83	276	30	13.48	33.33	6.01	25.03	294	0.09
68	12.20	33.49	5.94	258	50	13.40	33.35	5.98	25.06	291	0.15
78	10.70	33.40	4.74	240	75	11.25	33.43	5.18	25.53	246	0.22
93	9.86	33.53	4.46	216	100	9.38	33.58	4.28	25.97	205	0.27
108	9.20	33.60	4.20	200	150	8.80	33.88	2.90	26.30	174	0.37
133	8.94	33.82	3.43	180	200	8.23	34.03	2.16	26.50	154	0.45
153	8.72	33.91	2.64	170	250	7.46	34.07	1.88	26.65	140	0.53
177	8.48	34.00	2.31	160	300	6.90	34.11	1.46	26.75	130	0.60
206	8.16	34.04	2.10	152	400	6.23	34.18	0.82	26.90	116	0.72
235	7.72	34.07	1.92	144	500	5.62	34.20	0.46	27.00	107	0.84
275	7.05	34.08	1.76	134							
336	6.76	34.14	1.14	126							
410	6.16	34.18	0.78	116							
485	5.70	34.20	0.46	108							
565	5.26	34.24	0.48	101							

STRANGER; April 22, 1959; 2203 GCT; 35°13'N, 123°48.5'W; sounding, 2170 fm; wind, 130°, force 2; weather, cloudy; sea, moderate; wire angle, 00°. 70.80

2	14.22	33.25	6.06	315	0	(14.22)	(33.25)	(6.06)	(24.81)	(315)	(0.00)
12	13.74	33.26	5.95	304	10	13.80	33.26	5.96	24.90	306	0.03
32	13.50	33.26	6.08	300	20	13.60	33.26	6.02	24.95	302	0.06
57	13.46	33.28	6.03	298	30	13.51	33.26	6.07	24.96	300	0.09
67	13.34	33.30	6.06	294	50	13.48	33.28	6.05	24.98	298	0.15
77	12.30	33.28	5.87	276	75	12.38	33.28	5.91	25.20	278	0.22
92	11.36	33.39	5.24	251	100	10.53	33.45	4.53	25.67	233	0.29
106	10.08	33.48	4.21	223	150	8.90	33.74	3.48	26.17	186	0.39
132	9.20	33.64	3.92	198	200	8.33	33.93	3.31	26.41	163	0.48
153	8.84	33.75	3.45	184	250	7.54	33.95	3.50	26.53	151	0.56
176	8.52	33.86	3.71	171	300	6.75	33.95	2.68	26.65	140	0.64
206	8.27	33.94	3.25	162	400	5.69	34.02	1.40	26.84	122	0.77
236	7.74	33.94	3.72	154	500	5.64	34.20	0.59	26.99	108	0.89
276	7.15	33.95	2.91	145							
335	6.22	33.96	2.39	133							
411	5.64	34.04	1.26	120							
487	5.69	34.18	0.63	110							
565	5.16	34.25	0.47	98							

STRANGER; April 22, 1959; 1719 GCT; 34°53'N, 124°30'W; sounding, 2280 fm; wind, 160°, force 2; weather, partly cloudy; sea, moderate; wire angle, 04°. 70.90

2	13.97	33.12	5.79	319	0	(13.97)	(33.12)	(5.79)	(24.77)	(319)	(0.00)
12	13.93	33.12	5.79	318	10	13.94	33.12	5.79	24.78	318	0.03
31	13.90	33.19	5.69	313	20	13.91	33.12	5.78	24.78	317	0.06
36	14.47	33.46	5.58	304	30	13.90	33.19	5.70	24.83	313	0.10
41	13.37	33.22	5.90	300	50	12.93	33.17	5.84	25.02	296	0.16
46	13.02	33.15	5.94	299	75	13.00	33.31	5.74	25.11	286	0.23
51	12.92	33.17	5.83	295	100	10.52	33.32	5.04	25.58	242	0.30
71	13.03	33.31	5.79	288	150	9.22	33.76	4.63	26.14	189	0.41
95	10.87	33.29	5.15	250	200	8.29	33.91	4.08	26.40	164	0.50
116	10.02	33.53	4.83	219	250	7.32	33.98	3.20	26.60	145	0.57
155	9.04	33.80	4.60	184	300	6.91	34.04	2.38	26.70	136	0.65
184	8.50	33.87	3.97	170	400	6.34	34.16	1.22	26.87	119	0.78
219	8.04	33.96	4.23	157	500	5.76	34.26	0.53	27.02	105	0.90
248	7.34	33.98	3.21	145	600	5.06	34.25	0.38	27.09	98	1.00
297	6.92	34.03	2.41	136							
435	6.13	34.20	0.83	113							
519	5.62	34.27	0.47	102							
602	5.04	34.25	0.37	98							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

73.55 ORCA; April 25, 1959; 2038 GCT; 35°26.5'N, 121°37'W; sounding, 600 fm; wind, 120°, force 4; weather, cloudy; sea, moderate; wire angle, 13°.

1	14.22	33.37	5.70	306	0	(14.22)	(33.37)	(5.70)	(24.90)	(306)	(0.00)
11	14.16	33.37	5.76	305	10	14.17	33.37	5.75	24.92	305	0.03
30	13.73	33.37	5.67	296	20	13.98	33.37	5.74	24.96	301	0.06
59	12.00	33.39	4.94	262	30	13.73	33.37	5.67	25.01	296	0.09
70	10.86	33.39	4.60	243	50	13.22	33.38	5.49	25.11	286	0.15
84	10.10	33.55	3.64	218	75	10.50	33.45	4.18	25.68	232	0.21
99	9.64	33.62	3.37	206	100	9.62	33.62	3.36	25.96	206	0.27
114	9.26	33.68	3.14	196	150	8.70	33.85	2.93	26.29	174	0.36
138	8.89	33.82	2.94	180	200	8.22	34.03	1.97	26.50	154	0.45
157	8.60	33.87	2.91	171	250	7.95	34.07	1.56	26.58	147	0.52
186	8.29	33.98	2.06	159	300	7.54	34.13	1.34	26.68	137	0.60
216	8.18	34.06	1.92	151	400	6.99	34.20	0.86	26.82	124	0.73
245	7.99	34.07	1.61	148	500	6.30	34.24	0.51	26.94	112	0.86
295	7.58	34.13	1.37	138	600	5.59	34.28	0.40	27.06	101	0.97
349	7.22	34.18	0.94	129							
432	6.80	34.22	0.80	120							
518	6.16	34.25	0.45	110							
604	5.58	34.28	0.40	101							

73.60 ORCA; April 26, 1959; 0032 GCT; 35°15.5'N, 121°59'W; sounding, 1300 fm; wind, 160°, force 3; weather, overcast; sea, very rough; wire angle, 07°.

1	14.42	33.35	5.67	311	0	(14.42)	(33.35)	(5.67)	(24.85)	(311)	(0.00)
11	14.14	33.35	5.73	306	10	14.16	33.35	5.72	24.90	306	0.03
31	13.60	33.31	5.79	298	20	13.83	33.33	5.77	24.95	302	0.06
60	12.04	33.27	5.41	272	30	13.62	33.31	5.79	24.98	298	0.09
70	11.18	33.44	4.36	244	50	13.18	33.29	5.74	25.06	291	0.15
85	10.14	33.48	3.96	224	75	10.77	33.46	4.17	25.64	236	0.22
101	9.40	33.58	3.57	205	100	9.42	33.57	3.60	25.95	206	0.27
115	9.16	33.66	3.32	196	150	8.59	33.86	3.60	26.31	172	0.37
140	8.78	33.78	3.43	181	200	7.82	33.95	3.45	26.50	154	0.45
160	8.41	33.91	3.69	166	250	7.61	34.05	1.74	26.60	144	0.53
190	7.96	33.95	3.55	156	300	6.99	34.11	1.43	26.74	132	0.60
220	7.58	33.95	3.06	151	400	6.53	34.16	0.77	26.85	121	0.73
249	7.61	34.05	1.75	144	500	6.02	34.28	0.43	27.00	107	0.85
299	7.00	34.11	1.44	132	600	5.38	34.32	0.31	27.12	96	0.96
353	6.68	34.11	1.09	127							
438	6.44	34.23	0.59	115							
525	5.84	34.29	0.39	104							
611	5.32	34.32	0.30	95							

73.70 ORCA; April 26, 1959; 0713 GCT; 34°57'N, 122°38'W; sounding, 2000+ fm; wind, 160°, force 2; weather, partly cloudy; sea, rough; wire angle, 04°.

1	14.32	33.33	5.73	310	0	(14.32)	(33.33)	(5.73)	(24.86)	(310)	(0.00)
11	14.05	33.35	5.74	304	10	14.07	33.35	5.74	24.92	305	0.03
30	13.58	33.42	5.73	290	20	13.82	33.39	5.74	25.00	297	0.06
60	10.98	33.46	4.30	240	30	13.58	33.42	5.73	25.08	290	0.09
70	10.36	33.53	3.96	224	50	13.15	33.43	5.54	25.17	281	0.15
85	9.96	33.62	3.43	211	75	10.11	33.53	3.82	25.81	220	0.21
100	9.78	33.74	3.14	199	100	9.78	33.74	3.14	26.03	199	0.26
115	9.29	33.76	3.17	190	150	9.02	33.87	2.55	26.25	178	0.36
140	9.14	33.86	2.65	180	200	8.19	34.02	2.22	26.50	154	0.44
160	8.88	33.89	2.45	174	250	7.09	33.97	3.13	26.62	143	0.52
190	8.38	34.02	2.06	157	300	6.32	33.95	2.50	26.71	134	0.59
220	7.78	34.01	2.89	149	400	6.00	34.10	1.10	26.86	120	0.72
250	7.09	33.97	3.13	143	500	5.78	34.26	0.46	27.02	105	0.84
300	6.32	33.95	2.50	134	600	5.03	34.29	0.34	27.13	95	0.94
355	5.95	34.01	1.72	126							
440	6.09	34.18	0.56	115							
525	5.58	34.27	0.42	102							
611	4.99	34.29	0.32	94							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; April 26, 1959; 1249 GCT; 34°37'N, 123°19'W; sounding, 2100 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 10°. 73.80

1	14.53	33.17	5.68	326	0	(14.53)	(33.17)	(5.68)	(24.69)	(326)	(0.00)
11	14.52	33.15	5.70	328	10	14.52	33.15	5.70	24.68	328	0.03
31	13.78	33.16	5.77	313	20	14.22	33.16	5.73	24.74	322	0.06
40	13.72	33.16	5.76	311	30	13.79	33.16	5.77	24.83	313	0.10
50	13.72	33.17	5.70	310	50	13.72	33.17	5.70	24.86	310	0.16
64	13.69	33.17	5.75	309	75	13.52	33.18	5.70	24.90	306	0.24
80	13.42	33.18	5.67	304	100	12.76	33.32	5.44	25.16	281	0.31
99	12.81	33.32	5.45	282	150	9.46	33.58	3.91	25.96	206	0.44
123	11.04	33.37	4.73	247	200	8.66	33.89	2.65	26.33	170	0.53
141	9.82	33.50	4.10	218	250	8.18	34.01	1.91	26.49	155	0.61
170	9.02	33.75	3.58	186	300	7.43	34.06	1.68	26.64	141	0.69
199	8.67	33.89	2.66	171	400	6.39	34.12	0.86	26.83	123	0.83
228	8.38	33.96	2.14	162	500	5.91	34.22	0.48	26.97	110	0.95
266	8.02	34.05	1.78	150							
325	7.04	34.07	1.60	135							
399	6.40	34.12	0.87	123							
474	6.06	34.20	0.54	113							
556	5.52	34.25	0.35	102							

ORCA; April 26, 1959; 1826 GCT; 34°17'N, 124°00'W; sounding, 2400 fm; wind, 350°, force 4; weather, partly cloudy; sea, moderate; wire angle, 07°. 73.90

1	15.30	33.39	5.67	327	0	(15.30)	(33.39)	(5.67)	(24.68)	(327)	(0.00)
11	15.24	33.40	5.66	324	10	15.25	33.40	5.66	24.71	325	0.03
31	14.88	33.40	5.65	317	20	15.12	33.40	5.66	24.74	322	0.06
61	14.47	33.40	5.67	310	30	14.90	33.40	5.65	24.78	317	0.10
72	14.43	33.40	5.64	309	50	14.57	33.40	5.66	24.86	310	0.16
87	13.78	33.39	5.51	296	75	14.43	33.40	5.64	24.88	308	0.24
102	11.72	33.33	4.89	261	100	11.95	33.33	4.99	25.33	266	0.31
117	10.50	33.45	4.25	232	150	8.96	33.74	3.29	26.16	186	0.42
141	9.20	33.68	3.53	195	200	8.21	33.98	2.62	26.46	158	0.51
161	8.74	33.80	3.06	178	250	7.71	34.03	1.89	26.58	147	0.59
191	8.29	33.95	2.82	161	300	7.24	34.09	1.37	26.69	136	0.66
221	8.05	34.04	2.17	151	400	6.30	34.13	0.92	26.85	121	0.79
251	7.70	34.03	1.89	147	500	5.49	34.18	0.60	27.00	107	0.91
301	7.22	34.09	1.36	136	600	5.02	34.27	0.39	27.12	96	1.02
356	6.67	34.11	1.08	127							
440	5.96	34.15	0.77	115							
526	5.32	34.20	0.53	104							
612	4.98	34.28	0.37	94							

ORCA; April 25, 1959; 1031 GCT; 34°54.5'N, 121°10'W; sounding, 300 fm; wind, 100°, force 3; weather, drizzle; sea, rough; wire angle, 04°. 77.55

1	13.92	33.38	5.76	299	0	(13.92)	(33.38)	(5.76)	(24.98)	(299)	(0.00)
11	13.38	33.39	5.82	288	10	13.50	33.39	5.81	25.07	290	0.03
31	13.06	33.38	5.76	283	20	13.07	33.38	5.77	25.14	283	0.06
51	11.56	33.48	4.92	248	30	13.06	33.38	5.76	25.14	283	0.09
76	10.01	33.57	3.68	216	50	11.62	33.48	4.98	25.50	250	0.14
102	9.28	33.66	3.46	198	75	10.03	33.57	3.69	25.84	216	0.20
127	8.96	33.73	3.10	187	100	9.31	33.66	3.47	26.04	198	0.25
167	8.66	33.87	2.61	172	150	8.77	33.81	2.82	26.24	178	0.35
207	8.32	34.00	1.96	158	200	8.39	33.98	2.07	26.44	160	0.43
258	7.88	34.07	1.56	146	250	7.94	34.06	1.60	26.57	148	0.51

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

77.60 ORCA; April 25, 1959; 0657 GCT; 34°43.5'N, 121°31'W; sounding, 560 fm; wind, 130°, force 4; weather, drizzle; sea, rough; wire angle, 10°.

1	14.23	33.37	5.74	306	0	(14.23)	(33.37)	(5.74)	(24.90)	(306)	(0.00)
11	14.24	33.37	5.74	306	10	14.24	33.37	5.74	24.90	306	0.03
36	13.88	33.37	5.71	299	20	14.00	33.37	5.73	24.95	301	0.06
66	11.94	33.43	4.73	258	30	13.91	33.37	5.72	24.97	300	0.09
76	11.03	33.56	4.18	233	50	13.55	33.37	5.55	25.05	292	0.15
96	10.38	33.66	3.54	214	75	11.09	33.55	4.21	25.65	234	0.22
110	10.03	33.71	3.12	206	100	10.28	33.67	3.41	25.89	212	0.27
126	9.70	33.82	2.71	192	150	9.29	33.85	2.46	26.20	183	0.37
156	9.20	33.87	2.39	180	200	8.45	34.01	2.04	26.45	159	0.46
175	8.98	33.96	2.20	170	250	7.99	34.11	1.52	26.60	145	0.54
205	8.36	34.02	2.00	157	300	7.66	34.13	1.36	26.66	139	0.61
240	8.05	34.11	1.59	146	400	6.64	34.20	0.81	26.86	120	0.74
270	7.86	34.11	1.47	143	500	6.01	34.25	0.47	26.98	108	0.86
320	7.52	34.14	1.26	136	600	5.59	34.28	0.33	27.06	101	0.97
384	6.80	34.19	0.88	123							
485	6.08	34.25	0.51	109							
576	5.73	34.27	0.36	103							
651	5.20	34.32	0.32	94							

77.70 ORCA; April 25, 1959; 0037 GCT; 34°22.5'N, 122°14'W; sounding, 2200 fm; wind, 120°, force 4; weather, overcast; sea, moderate; wire angle, 17°.

1	14.40	33.31	5.70	314	0	(14.40)	(33.31)	(5.70)	(24.82)	(314)	(0.00)
10	14.38	33.33	5.78	312	10	14.38	33.33	5.78	24.84	312	0.03
34	13.86	33.33	5.76	302	20	14.01	33.33	5.77	24.91	305	0.06
63	13.21	33.31	5.59	290	30	13.90	33.33	5.76	24.94	302	0.09
72	12.19	33.30	5.28	272	50	13.84	33.33	5.74	24.96	301	0.15
91	10.76	33.36	4.57	243	75	11.86	33.31	5.14	25.32	266	0.22
106	9.94	33.49	4.08	220	100	10.27	33.43	4.27	25.70	230	0.29
120	9.26	33.62	3.75	200	150	8.87	33.80	3.06	26.22	181	0.39
147	8.90	33.78	3.15	183	200	8.12	33.94	2.75	26.45	159	0.48
166	8.68	33.88	2.76	172	250	7.64	34.04	1.86	26.59	146	0.55
193	8.27	33.93	2.76	162	300	6.79	34.04	1.73	26.72	134	0.62
226	7.66	33.98	2.70	150	400	6.26	34.14	0.78	26.86	120	0.76
254	7.63	34.05	1.78	144	500	5.48	34.18	0.45	27.00	107	0.87
301	6.78	34.04	1.73	134	600	4.99	34.27	0.30	27.12	95	0.98
362	6.56	34.11	1.03	126							
459	5.76	34.16	0.54	112							
547	5.22	34.22	0.37	102							
623	4.89	34.29	0.28	93							

77.80 ORCA; April 24, 1959; 1945 GCT; 34°07'N, 122°53'W; sounding, 2185 fm; wind, 120°, force 4; weather, cloudy; sea, moderate; wire angle, 13°.

1	14.35	33.17	5.62	323	0	(14.35)	(33.17)	(5.62)	(24.72)	(323)	(0.00)
11	14.22	33.17	5.61	320	10	14.23	33.17	5.61	24.75	321	0.03
35	13.65	33.22	5.57	306	20	13.80	33.21	5.57	24.87	309	0.06
64	13.16	33.23	5.64	296	30	13.74	33.21	5.57	24.88	308	0.09
75	12.62	33.30	5.20	280	50	13.40	33.22	5.61	24.96	300	0.16
94	10.72	33.36	4.41	242	75	12.62	33.30	5.20	25.17	280	0.23
109	9.65	33.42	4.08	221	100	10.17	33.38	4.25	25.68	232	0.29
123	9.30	33.56	3.90	205	150	8.90	33.71	3.44	26.14	188	0.40
152	8.88	33.71	3.43	188	200	8.38	33.92	2.40	26.39	164	0.49
171	8.68	33.80	3.39	178	250	7.49	34.03	2.01	26.60	144	0.57
200	8.38	33.92	2.40	164	300	6.91	34.09	1.44	26.74	131	0.64
234	7.84	34.01	1.96	150	400	6.36	34.19	0.74	26.89	117	0.77
263	7.23	34.04	2.03	140	500	5.71	34.27	0.51	27.03	104	0.88
311	6.84	34.11	1.30	130	600	5.28	34.32	0.39	27.13	94	0.99
375	6.52	34.17	0.84	120							
473	5.88	34.25	0.55	107							
564	5.36	34.30	0.44	97							
639	5.21	34.34	0.30	93							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; April 24, 1959; 1303 GCT; 33°43'N, 123°40'W; sounding, 2400 fm; wind, 140°, force 2; weather, drizzle; sea, slight; wire angle, 18°. 77.90

1	15.20	33.41	5.64	323	0	(15.20)	(33.41)	(5.64)	(24.73)	(323)	(0.00)
10	14.71	33.41	5.65	313	10	14.71	33.41	5.65	24.83	313	0.03
29	14.53	33.40	5.66	310	20	14.57	33.40	5.65	24.86	310	0.06
53	14.48	33.40	5.64	309	30	14.53	33.40	5.66	24.86	310	0.09
62	14.46	33.42	5.61	307	50	14.49	33.40	5.65	24.87	309	0.16
72	14.44	33.40	5.66	308	75	14.44	33.40	5.66	24.88	308	0.23
86	12.42	33.37	4.93	272	100	10.96	33.46	4.34	25.60	239	0.30
100	10.96	33.46	4.34	239	150	9.10	33.74	3.31	26.14	188	0.41
124	9.66	33.62	4.11	206	200	8.43	33.95	2.41	26.41	163	0.50
142	9.26	33.68	3.59	196	250	7.80	34.06	1.85	26.58	146	0.58
166	8.86	33.84	2.93	178	300	7.32	34.13	1.37	26.71	134	0.65
194	8.50	33.93	2.49	166	400	6.62	34.16	0.68	26.83	123	0.78
222	8.20	34.02	2.13	154	500	5.93	34.22	0.46	26.97	110	0.90
259	7.69	34.07	1.75	144							
316	7.20	34.14	1.28	132							
388	6.69	34.15	0.72	124							
461	6.20	34.20	0.52	114							
541	5.66	34.23	0.40	106							

ORCA; April 23, 1959; 0238 GCT; 34°24.5'N, 120°36'W; sounding, 156 fm; wind, 340°, force 5; weather, cloudy; sea, moderate; wire angle, 34°. 80.52

1	12.54	33.67	4.84	252	0	(12.54)	(33.67)	(4.84)	(25.48)	(252)	(0.00)
9	12.50	33.67	4.90	251	10	12.50	33.67	4.90	25.48	251	0.02
27	10.70	33.77	3.31	212	20	11.55	33.72	4.17	25.70	230	0.05
45	10.27	33.80	2.54	202	30	10.54	33.78	3.01	25.93	208	0.07
66	10.02	33.84	2.60	196	50	10.20	33.81	2.55	26.02	200	0.11
90	9.80	33.87	2.38	190	75	9.93	33.85	2.53	26.09	194	0.16
113	9.61	33.95	2.25	181	100	9.72	33.90	2.31	26.16	186	0.21
150	9.26	34.00	1.92	172	150	9.26	34.00	1.92	26.32	172	0.30
189	8.86	34.07	1.62	160							

ORCA; April 23, 1959; 0506, 0548 GCT; 34°18.5'N, 120°48.5'W; sounding, 415 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 30°, 35°. 80.55

1	13.12	33.53	5.78	272	0	(13.12)	(33.53)	(5.78)	(25.26)	(272)	(0.00)
10	13.10	33.50	5.81	274	10	13.10	33.50	5.81	25.24	274	0.03
32	12.88	33.48	5.52	272	20	13.04	33.49	5.70	25.24	274	0.05
40	12.06	33.48	4.85	257	30	12.93	33.48	5.54	25.26	272	0.08
53	11.28	33.58	4.20	236	50	11.45	33.56	4.32	25.59	240	0.13
66	10.48	33.58	3.85	222	75	10.10	33.58	3.71	25.85	216	0.19
88	9.93	33.58	3.65	213	100	9.68	33.70	3.33	26.01	201	0.24
104	9.68	33.74	3.24	198	150	9.10	33.95	2.29	26.30	173	0.34
121	9.42	33.78	2.97	190	200	8.72	34.06	1.70	26.45	159	0.42
147	9.13	33.94	2.35	174	250	8.14	34.08	1.56	26.56	149	0.50
172	8.86	34.00	1.96	166	300	7.62	34.14	1.28	26.67	138	0.58
207	8.69	34.07	1.68	158	400	6.78	34.17	0.77	26.82	124	0.71
233	8.38	34.06	1.62	154	500	6.26	34.26	0.52	26.96	111	0.83
266	7.90	34.11	1.47	144							
322	7.45	34.15	1.15	135							
412	6.70	34.18	0.68	122							
496	6.28	34.26	0.53	111							
570	5.82	34.26	0.40	106							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

80.60 ORCA; April 23, 1959; 0921 GCT; 34°09'N, 121°09.5'W; sounding, 1200 fm; wind, 340°, force 2; weather, cloudy; sea, moderate; wire angle, 19°.

1	14.00	33.42	5.73	298	0	(14.00)	(33.42)	(5.73)	(24.98)	(298)	(0.00)
10	14.01	33.44	5.75	297	10	14.01	33.44	5.75	25.00	297	0.03
29	13.92	33.44	5.69	294	20	13.98	33.44	5.74	25.00	296	0.06
39	13.84	33.42	5.66	294	30	13.91	33.44	5.69	25.02	294	0.09
53	13.31	33.44	5.44	283	50	13.54	33.43	5.53	25.09	288	0.15
67	11.80	33.53	4.72	248	75	11.32	33.56	4.41	25.62	238	0.21
91	10.77	33.58	3.98	227	100	10.24	33.60	3.59	25.84	217	0.27
100	10.24	33.60	3.59	217	150	9.29	33.79	2.73	26.14	188	0.37
129	9.72	33.69	3.28	202	200	8.50	34.00	2.05	26.43	161	0.46
147	9.38	33.77	2.79	190	250	8.15	34.14	1.37	26.60	145	0.54
175	8.72	33.89	2.46	171	300	7.70	34.16	1.12	26.68	136	0.61
207	8.50	34.04	1.90	157	400	6.70	34.21	0.72	26.86	120	0.74
235	8.33	34.13	1.48	148	500	5.80	34.27	0.39	27.03	104	0.86
282	7.82	34.14	1.22	140	600	(5.31)	(34.32)		(27.12)	(95)	(0.97)
336	7.43	34.22	0.94	129							
418	6.50	34.21	0.66	117							
499	5.81	34.27	0.40	104							
584	5.38	34.31	0.33	96							

80.70 ORCA; April 23, 1959; 1625 GCT; 33°50'N, 121°53.5'W; sounding, 2000 fm; wind, 340°, force 2; weather, overcast; sea, rough; wire angle, 02°.

0	14.07	33.44	5.66	298	0	14.07	33.44	5.66	24.98	298	0.00
10	14.04	33.43	5.83	298	10	14.04	33.43	5.83	24.98	298	0.03
30	13.98	33.44	5.66	296	20	14.01	33.44	5.72	25.00	297	0.06
60	13.86	33.44	5.59	293	30	13.98	33.44	5.66	25.01	296	0.09
70	13.40	33.46	5.40	283	50	13.91	33.44	5.60	25.02	294	0.15
86	11.55	33.48	4.26	248	75	12.68	33.47	4.94	25.29	269	0.22
101	10.87	33.63	3.74	225	100	10.89	33.63	3.75	25.75	225	0.28
116	9.67	33.68	3.34	202	150	9.00	33.83	2.72	26.22	180	0.38
141	8.94	33.73	3.35	187	200	8.35	33.93	2.53	26.40	164	0.47
161	9.08	33.93	2.24	174	250	7.81	34.02	1.80	26.56	149	0.55
191	8.51	33.93	2.51	166	300	7.21	34.09	1.40	26.70	136	0.62
221	8.04	33.93	2.53	159	400	6.24	34.16	0.80	26.88	118	0.76
251	7.80	34.03	1.79	148	500	5.59	34.22	0.59	27.01	106	0.87
301	7.20	34.09	1.39	136	600	5.00	34.30	0.40	27.14	94	0.98
356	6.60	34.14	0.97	124							
442	5.96	34.18	0.69	113							
528	5.40	34.24	0.53	102							
614	4.92	34.31	0.36	91							

80.80 ORCA; April 23, 1959; 2220, 2255 GCT; 33°29'N, 122°32'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, overcast; sea, very rough; wire angle, 03°, 03°.

1	14.81	33.27	5.74	326	0	(14.81)	(33.27)	(5.74)	(24.70)	(326)	(0.00)
11	14.16	33.30	5.77	310	10	14.17	33.30	5.77	24.86	310	0.03
31	14.04	33.30	5.77	308	20	14.09	33.30	5.77	24.88	308	0.06
56	13.95	33.30	5.70	306	30	14.05	33.30	5.77	24.88	308	0.09
66	13.90	33.30	5.72	305	50	13.97	33.30	5.71	24.90	306	0.15
76	13.49	33.31	5.60	296	75	13.59	33.31	5.64	24.99	298	0.23
92	11.34	33.42	4.49	248	100	10.75	33.47	4.20	25.65	235	0.30
107	10.32	33.53	4.00	223	150	8.94	33.78	3.24	26.20	183	0.40
132	9.19	33.73	3.35	190	200	8.27	33.97	2.53	26.45	159	0.49
					250	7.50	34.08	1.78	26.65	140	0.56
151	8.92	33.78	3.22	183	300	6.98	34.10	1.37	26.74	131	0.63
176	8.65	33.89	2.79	170	400	6.17	34.19	0.75	26.92	114	0.76
206	8.18	33.99	2.46	156	500	5.60	34.24	0.44	27.03	104	0.88
237	7.68	34.07	1.93	144							
277	7.20	34.09	1.57	135							
337	6.66	34.13	1.08	126							
413	6.07	34.20	0.71	113							
489	5.64	34.23	0.48	106							
570	5.19	34.30	0.33	95							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m	
ORCA; April 24, 1959; 0446, 0610 GCT; 33°09'N, 123°13'W; sounding, 2200 fm; wind, 200°, force 2; weather, partly cloudy; sea, very rough; wire angle, 02°, 13°.												80.90
1	15.55	33.47	5.59	326	0	(15.55)	(33.47)	(5.59)	(24.70)	(326)	(0.00)	
11	14.78	33.39	5.65	316	10	14.81	33.39	5.65	24.80	316	0.03	
31	14.38	33.42	5.65	305	20	14.51	33.41	5.65	24.88	308	0.06	
56	14.29	33.42	5.62	304	30	14.39	33.42	5.65	24.91	305	0.09	
66	14.27	33.47	5.57	300	50	14.30	33.42	5.63	24.92	304	0.15	
76	13.50	33.44	5.25	286	75	13.85	33.46	5.41	25.04	292	0.23	
91	11.58	33.46	4.37	250	100	11.05	33.47	4.27	25.60	240	0.30	
106	10.32	33.50	4.14	225	150	9.13	33.77	3.12	26.16	186	0.40	
131	9.44	33.66	3.53	200	200	8.45	33.94	2.52	26.40	164	0.49	
152	9.10	33.78	3.10	186	250	7.84	34.03	1.93	26.56	148	0.57	
177	8.82	33.87	2.88	175	300	7.29	34.09	1.51	26.68	137	0.64	
208	8.32	33.97	2.37	160	400	6.43	34.18	0.82	26.87	119	0.78	
238	7.98	34.02	2.01	151	500	5.98	34.28	0.42	27.01	106	0.90	
278	7.54	34.06	1.73	143								
338	6.84	34.13	1.15	128								
414	6.36	34.19	0.74	117								
489	6.02	34.27	0.45	107								
570	5.58	34.29	0.32	100								
3724a)	1.52	34.63	2.94									
3825	1.50	34.64	3.05									
3924	1.50	34.61	3.08									
ORCA; April 22, 1959; 2128 GCT; 34°15.5'N, 119°57.5'W; sounding, 315 fm; wind, 260°, force 1; weather, partly cloudy; sea, slight; wire angle, 05°.												82.47
0	13.42	33.75	6.92	262	0	13.42	33.75	6.92	25.36	262	0.00	
10	12.46	33.73	6.11	246	10	12.46	33.73	6.11	25.53	246	0.02	
30	10.54	33.75	3.24	210	20	11.10	33.74	4.15	25.80	221	0.05	
50	10.02	33.84	2.66	196	30	10.54	33.75	3.24	25.91	210	0.07	
74	9.72	33.90	2.26	186	50	10.02	33.84	2.66	26.06	196	0.11	
99	9.62	33.96	2.09	180	75	9.71	33.90	2.25	26.17	186	0.16	
124	9.45	34.05	1.81	171	100	9.61	33.96	2.08	26.23	180	0.20	
163	9.04	34.14	1.76	158	150	9.18	34.11	1.76	26.42	162	0.29	
204	8.74	34.20	1.36	149	200	8.79	34.20	1.42	26.55	150	0.37	
254	7.97	34.16	1.08	141	250	8.01	34.16	1.10	26.64	141	0.44	
304	7.72	34.14	0.99	138	300	7.76	34.14	1.00	26.66	139	0.52	
409	6.96	34.24	0.59	121	400	7.01	34.22	0.63	26.83	123	0.65	
ORCA; April 22, 1959; 1746 GCT; 34°13.5'N, 119°21.5'W; sounding, 12 fm; wind, direction missing, force 1; weather, missing; sea, smooth; wire angle, 00°.												83.40
1	14.76	33.64	6.13	297	0	(14.76)	(33.64)	(6.13)	(25.00)	(297)	(0.00)	
11	13.81	33.66	6.51	276	10	14.06	33.66	6.42	25.16	282	0.03	
ORCA; April 22, 1959; 1537 GCT; 34°08'N, 119°34.5'W; sounding, 134 fm; wind, direction missing, force 1; weather, cloudy; sea, smooth; wire angle, 01°.												83.43
0	13.46	33.68	6.30	268	0	13.46	33.68	6.30	25.30	268	0.00	
10	12.92	33.69	6.07	257	10	12.92	33.69	6.07	25.42	257	0.03	
31	12.70	33.69	5.62	253	20	12.77	33.69	5.79	25.45	254	0.05	
51	12.18	33.68	4.96	244	30	12.71	33.69	5.63	25.46	253	0.08	
77	10.28	33.72	3.14	208	50	12.19	33.68	4.97	25.55	244	0.13	
101	10.16	33.86	2.52	196	75	10.36	33.72	3.21	25.91	210	0.18	
126	9.68	34.00	1.97	179	100	10.15	33.86	2.53	26.06	196	0.24	
168	9.29	34.11	1.53	164	150	9.44	34.06	1.71	26.34	170	0.33	
208	8.88	34.18	1.27	153	200	8.98	34.17	1.31	26.50	154	0.41	

a) Special cast for aluminum samples.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
83.51	ORCA; April 22, 1959; 1014 GCT; 33°51.5'N, 120°07.5'W; sounding, 68 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 11°.										
2	13.64	33.57	5.31	280	0	(13.64)	(33.57)	(5.31)	(25.18)	(280)	(0.00)
12	13.35	33.58	5.24	274	10	13.42	33.58	5.28	25.23	275	0.03
31	11.21	33.66	3.74	228	20	12.70	33.60	4.83	25.39	260	0.05
51	10.05	33.84	2.74	196	30	11.22	33.66	3.75	25.71	229	0.08
75	9.65	33.96	2.29	181	50	10.09	33.83	2.76	26.05	197	0.12
100	9.37	34.01	2.04	172	75	9.65	33.96	2.29	26.22	181	0.17
					100	9.37	34.01	2.04	26.31	172	0.21
83.55	ORCA; April 22, 1959; 0649 GCT; 33°44'N, 120°24.5'W; sounding, 530 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 21°.										
1	13.97	33.56	5.60	287	0	(13.97)	(33.56)	(5.60)	(25.10)	(287)	(0.00)
10	13.96	33.57	5.65	286	10	13.96	33.57	5.65	25.11	286	0.03
34	13.86	33.58	5.61	284	20	13.94	33.57	5.64	25.12	285	0.06
45	12.46	33.59	4.42	256	30	13.90	33.58	5.62	25.13	284	0.08
57	11.34	33.65	3.59	232	50	12.03	33.61	4.03	25.52	247	0.14
72	10.54	33.66	3.53	217	75	10.44	33.67	3.50	25.86	215	0.20
96	9.90	33.77	3.02	198	100	9.68	33.80	2.95	26.09	193	0.25
113	9.06	33.84	2.84	181	150	8.50	33.94	2.25	26.39	164	0.34
132	8.76	33.86	2.66	174	200	8.04	34.00	2.03	26.50	154	0.42
159	8.38	33.96	2.17	162	250	7.63	34.06	1.75	26.61	144	0.49
188	8.13	33.99	2.10	156	300	7.22	34.15	1.15	26.74	132	0.56
225	7.90	34.01	1.90	151	400	6.38	34.22	0.59	26.91	115	0.69
253	7.60	34.07	1.71	142	500	5.99	34.25	0.51	26.99	108	0.81
300	7.22	34.15	1.15	132	600	5.56	34.29	0.37	27.07	100	0.92
362	6.53	34.20	0.64	118							
458	6.22	34.24	0.54	112							
547	5.76	34.27	0.44	104							
623	5.48	34.29	0.34	99							
83.60	ORCA; April 22, 1959; 0313 GCT; 33°31'N, 120°43'W; sounding, 1200 fm; wind, 300°, force 4; weather, partly cloudy; sea, moderate; wire angle, 31°.										
1	13.78	33.47	5.71	289	0	(13.78)	(33.47)	(5.71)	(25.08)	(289)	(0.00)
10	13.78	33.46	5.74	290	10	13.78	33.46	5.74	25.07	290	0.03
32	13.76	33.48	5.65	288	20	13.77	33.47	5.69	25.08	289	0.06
56	12.61a)	33.47	4.95	267	30	13.76	33.48	5.65	25.09	288	0.09
64	11.14	33.52	4.14	238	50	13.60	33.48	5.54	25.12	286	0.14
81	9.98	33.60	3.61	212	75	10.78	33.54	3.97	25.70	230	0.21
92	9.52	33.66	3.37	201	100	9.30	33.73	3.23	26.10	193	0.26
105	9.19	33.77	3.15	188	150	8.65	33.89	2.60	26.33	171	0.35
128	8.92	33.84	2.84	178	200	8.12	34.02	2.10	26.50	154	0.44
143	8.76	33.87	2.66	173							
166	8.35	33.96	2.34	161							
195	8.16	34.01	2.11	154							
221	7.99	34.03	1.88	150							

a) Alternate value, 12.47°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m
ORCA; April 21, 1959; 2028 GCT; 33°16'N, 121°25.5'W; sounding, 2100 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 19°.											83.70
3	14.32	33.42	5.62	304	0	(14.32)	(33.42)	(5.62)	(24.93)	(304)	(0.00)
12	14.28	33.40	5.67	305	10	14.29	33.40	5.66	24.92	305	0.03
31	14.20	33.42	5.65	302	20	14.24	33.41	5.66	24.93	304	0.06
60	13.38	33.45	5.24	284	30	14.21	33.42	5.65	24.94	302	0.09
69	12.61	33.40	4.78	272	50	14.14	33.43	5.63	24.97	300	0.15
83	11.78	33.49	4.33	251	75	12.29	33.43	4.57	25.34	264	0.22
97	10.14	33.48	3.99	224	100	9.94	33.48	3.95	25.80	221	0.28
111	9.44	33.55	3.82	208	150	8.88	33.76	3.03	26.19	183	0.38
135	8.98	33.73	3.30	187	200	8.23	33.96	2.30	26.45	159	0.47
154	8.82	33.78	2.96	182	250	7.65	34.05	1.69	26.61	144	0.55
183	8.46	33.93	2.54	166	300	7.10	34.09	1.19	26.71	134	0.62
211	8.10	33.98	2.17	156	400	6.22	34.15	0.67	26.88	118	0.75
240	7.76	34.04	1.77	146	500	5.75	34.22	0.40	27.00	107	0.87
287	7.23	34.08	1.30	137	600	(6.31)	(34.30)		(27.11)	(96)	(0.98)
340	6.70	34.12	0.93	127							
421	6.08	34.17	0.59	116							
504	5.72	34.23	0.39	106							
589	5.37	34.29	0.31	98							
ORCA; April 21, 1959; 1334, 1406 GCT; 32°55'N, 122°09'W; sounding, 2200 fm; wind, 300°, force 2; weather, overcast; sea, rough; wire angle, 09°, 10°.											83.80
1	14.22	33.42	5.65	302	0	(14.22)	(33.42)	(5.65)	(24.94)	(302)	(0.00)
11	14.22	33.44	5.67	300	10	14.22	33.44	5.67	24.96	300	0.03
31	14.14	33.44	5.67	299	20	14.20	33.44	5.67	24.96	300	0.06
60	14.12	33.43	5.67	299	30	14.15	33.44	5.67	24.98	299	0.09
70	13.36	33.46	5.25	282	50	14.14	33.43	5.67	24.98	299	0.15
85	12.12	33.43	4.74	262	75	13.02	33.45	5.11	25.21	276	0.22
100	10.89	33.57	3.84	230	100	10.89	33.57	3.84	25.70	230	0.29
115	10.20	33.67	3.49	211	150	9.09	33.78	3.05	26.16	186	0.39
140	9.24	33.71	3.39	193	200	8.29	33.96	2.68	26.44	160	0.48
160	8.90	33.84	2.69	178	250	7.72	34.04	1.97	26.58	146	0.56
189	8.48	33.93	3.02	165	300	7.29	34.11	1.37	26.70	135	0.63
					400	6.49	34.19	0.71	26.87	119	0.76
218	8.00	34.00	2.18	153	500	5.81	34.30	0.41	27.04	103	0.88
248	7.74	34.04	1.98	146	600	5.19	34.29	0.34	27.12	96	0.98
298	7.30	34.11	1.38	135							
353	6.81	34.16	0.98	125							
438	6.24	34.23	0.50	113							
523	5.66	34.31	0.39	100							
608	5.14	34.29	0.33	96							
ORCA; April 21, 1959; 0700 GCT; 32°34'N, 122°48'W; sounding, 2200 fm; wind, 300°, force 3; weather, overcast; sea, very rough; wire angle, 08°.											83.90
1	15.06	33.40	5.51	321	0	(15.06)	(33.40)	(5.51)	(24.75)	(321)	(0.00)
11	15.06	33.42	5.48	320	10	15.06	33.42	5.49	24.76	320	0.03
36	14.98	33.44	5.46	316	20	15.03	33.44	5.47	24.78	318	0.06
65	14.14	33.37	5.49	304	30	14.99	33.44	5.46	24.80	316	0.10
76	12.96	33.33	5.24	284	50	14.96	33.44	5.46	24.80	316	0.16
96	11.08	33.39	4.75	246	75	13.14	33.33	5.29	25.10	287	0.23
109	10.04	33.50	4.27	221	100	10.78	33.42	4.62	25.60	239	0.30
125	9.44	33.56	4.04	207	150	9.12	33.74	3.16	26.14	189	0.41
155	9.04	33.78	3.07	185	200	8.06	33.93	3.33	26.45	159	0.50
175	8.44	33.86	3.37	170	250	7.53	34.01	2.14	26.59	146	0.57
205	8.00	33.94	3.32	158	300	7.02	34.06	1.61	26.70	136	0.65
239	7.61	33.99	2.48	148	400	6.39	34.18	0.80	26.88	118	0.78
269	7.40	34.05	1.73	141	500	5.82	34.26	0.53	27.01	106	0.90
319	6.81	34.07	1.52	132	600	5.31	34.32	0.39	27.12	95	1.00
385	6.46	34.16	0.93	120							
484	5.90	34.25	0.56	107							
574	5.48	34.31	0.42	98							
650	4.94	34.33	0.33	90							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

87.35 ORCA; April 19, 1959; 0913, 0936 GCT; 33°50'N, 118°37.5'W; sounding, 324 fm; wind, direction missing, force 1; weather, cloudy; sea, slight; wire angle, 03°, 02°.

1	15.58	33.58	5.93	318	0	(15.58)	(33.58)	(5.93)	(24.78)	(318)	(0.00)
11	15.57	33.58	5.95	318	10	15.57	33.58	5.95	24.78	318	0.03
30	13.17	33.52	4.88	274	20	15.25	33.58	5.87	24.84	312	0.06
50	11.30	33.57	3.71	237	30	13.17	33.52	4.88	25.24	274	0.09
74	10.55	33.70	3.12	214	50	11.30	33.57	3.71	25.63	237	0.14
99	10.19	33.86	2.62	197	75	10.53	33.71	3.09	25.88	214	0.20
					100	10.18	33.87	2.58	26.06	196	0.25
123	9.90	33.96	2.18	185	150	9.67	34.08	1.80	26.32	172	0.34
163	9.57	34.14	1.66	166	200	9.21	34.22	1.36	26.49	155	0.43
203	9.17	34.22	1.35	154	250	8.53	34.20	1.27	26.59	146	0.50
254	8.48	34.20	1.26	145	300	8.04	34.24	1.09	26.69	136	0.58
306	7.99	34.25	1.05	134							

87.40 ORCA; April 19, 1959; 1304 GCT; 33°40'N, 118°58.5'W; sounding, 465 fm; wind, 240°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.

0	16.60	33.60	5.52	339	0	16.60	33.60	5.52	24.56	339	0.00
10	16.62	33.62	5.54	338	10	16.62	33.62	5.54	24.56	338	0.03
30	14.13	33.56	5.49	290	20	15.73	33.60	5.54	24.76	320	0.07
40	12.36	33.58	4.28	255	30	14.13	33.56	5.49	25.07	290	0.10
50	11.62	33.58	4.03	242	50	11.62	33.58	4.03	25.57	242	0.15
65	10.86	33.63	3.64	225	75	10.58	33.66	3.53	25.83	218	0.21
81	10.42	33.68	3.48	214	100	9.81	33.78	3.09	26.05	197	0.26
101	9.78	33.79	3.03	196	150	9.14	34.02	2.15	26.36	168	0.35
126	9.38	33.92	2.52	180	200	8.79	34.17	1.55	26.52	152	0.43
146	9.18	34.00	2.22	170	250	8.39	34.23	1.25	26.63	142	0.51
176	8.96	34.13	1.78	157	300	7.86	34.24	1.07	26.72	134	0.58
206	8.74	34.18	1.47	150	400	6.90	34.28	0.67	26.88	118	0.71
236	8.52	34.23	1.28	144	500	6.14	34.32	0.42	27.02	105	0.83
275	8.11	34.23	1.19	138							
335	7.51	34.25	0.88	128							
412	6.80	34.28	0.61	116							
487	6.22	34.31	0.45	106							
567	5.83	34.38	0.31	97							

87.45 ORCA; April 19, 1959; 1631 GCT; 33°30'N, 119°19'W; sounding, 917 fm; wind, 240°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.

2	15.34	33.60	5.67	312	0	(15.34)	(33.60)	(5.67)	(24.84)	(312)	(0.00)
12	15.30	33.64	5.65	308	10	15.31	33.64	5.65	24.88	308	0.03
32	11.66	33.64	3.84	238	20	14.80	33.64	5.52	24.99	298	0.06
41	10.96	33.68	3.40	222	30	11.86	33.64	3.96	25.58	241	0.09
50	10.68	33.70	3.22	217	50	10.68	33.70	3.22	25.84	217	0.13
66	10.23	33.77	3.07	204	75	9.94	33.81	2.88	26.06	196	0.18
81	9.76	33.84	2.72	192	100	9.56	33.92	2.43	26.20	182	0.23
101	9.54	33.92	2.42	182	150	9.09	34.05	1.92	26.38	166	0.32
126	9.38	33.97	2.27	176	200	8.58	34.14	1.56	26.54	151	0.40
146	9.12	34.04	1.95	167	250	8.13	34.18	1.21	26.63	142	0.48
176	8.84	34.11	1.78	158	300	7.76	34.21	1.00	26.71	134	0.55
205	8.52	34.14	1.53	150	400	6.84	34.23	0.62	26.86	120	0.68
234	8.24	34.16	1.32	145	500	6.25	34.30	0.42	26.99	108	0.80
274	7.98	34.20	1.09	138							
333	7.48	34.22	0.88	130							
407	6.78	34.23	0.60	120							
482	6.36	34.29	0.44	110							
563	5.88	34.32	0.29	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 -5 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 -5 10 cm/g	ΔD dyn. m

ORCA; April 19, 1959; 2251 GCT; 33°10'N, 120°00.5'W; sounding, 650 fm; wind, 300°, force 4; weather, overcast; sea, very rough; wire angle, 17°. 87.55

2	15.10	33.51	5.52	314	0	(15.10)	(33.51)	(5.52)	(24.82)	(314)	(0.00)
12	15.10	33.52	5.50	313	10	15.10	33.52	5.50	24.83	313	0.03
31	15.12	33.53	5.46	312	20	15.11	33.53	5.47	24.83	313	0.06
41	15.06	33.53	5.50	311	30	15.12	33.53	5.47	24.83	313	0.09
55	12.68	33.42	4.65	272	50	13.95	33.48	5.12	25.06	292	0.15
70	11.16	33.42	4.44	246	75	10.78	33.43	4.38	25.62	238	0.22
93	9.95	33.53	4.05	218	100	9.82	33.55	3.95	25.88	214	0.28
112	9.62	33.60	3.71	207	150	9.11	33.83	2.75	26.20	182	0.38
131	9.18	33.69	3.42	194	200	8.44	34.00	2.02	26.44	160	0.47
150	9.11	33.83	2.75	182	250	7.67	34.06	1.69	26.61	144	0.54
179	8.73	33.93	2.38	168	300	7.29	34.13	1.26	26.72	133	0.62
212	8.27	34.03	1.86	155	400	6.67	34.24	0.68	26.89	117	0.74
241	7.77	34.05	1.75	146	500	6.10	34.29	0.41	27.00	107	0.86
289	7.38	34.11	1.34	136	600	(5.60)	(34.32)	(0.34)	(27.10)	(98)	(0.97)
342	6.96	34.20	0.94	124							
424	6.54	34.25	0.54	114							
507	6.06	34.29	0.40	106							
591	5.62	34.32	0.34	99							

ORCA; April 20, 1959; 0247, 0324 GCT; 32°59'N, 120°22.5'W; sounding, 410 fm; wind, 290°, force 6; weather, overcast; sea, very rough; wire angle, 25°, 27°. 87.60

2	14.82	33.54	5.51	306	0	(14.82)	(33.54)	(5.51)	(24.90)	(306)	(0.00)
10	14.82	33.53	5.49	306	10	14.82	33.53	5.49	24.90	306	0.03
34	14.84	33.51	5.47	308	20	14.82	33.52	5.48	24.89	307	0.06
62	13.20	33.39	5.21	284	30	14.83	33.51	5.47	24.88	308	0.09
70	11.80	33.40	4.58	258	50	14.84	33.51	5.47	24.88	308	0.15
88	10.64	33.50	3.96	231	75	11.38	33.42	4.37	25.50	249	0.22
100	10.08	33.58	3.72	216	100	10.08	33.58	3.72	25.85	216	0.28
113	9.80	33.60	3.68	210	150	8.93	33.84	2.84	26.24	179	0.38
139	9.16	33.77	3.07	187	200	8.27	33.98	2.27	26.46	158	0.47
156	8.83	33.87	2.73	175	250	7.63	34.06	1.75	26.62	143	0.54
181	8.48	33.95	2.42	164	300	7.24	34.15	1.58	26.74	132	0.62
211	8.14	34.00	2.18	155	400	6.53	34.23	1.00	26.90	116	0.74
236	7.76	34.04	1.83	147	500	5.96	34.24	0.50	26.98	109	0.86
279	7.40	34.11	1.66	137							
347a)	6.88	34.22	1.40	122							
445a)	6.27	34.23	0.68	113							
533a)	5.78	34.25	0.43	106							

ORCA; April 20, 1959; 1216 GCT; 32°36'N, 121°10.5'W; sounding, 2100 fm; wind, 320°, force 4; weather, partly cloudy; sea, high; wire angle, 15°. 87.70

2	14.36	33.48		300	0	(14.36)	(33.48)		(24.96)	(300)	(0.00)
11	14.34	33.45		302	10	14.34	33.45		24.94	302	0.03
36	14.37	33.48		300	20	14.35	33.47		24.96	301	0.06
65	14.34	33.47		300	30	14.36	33.47		24.96	301	0.09
74	14.34	33.49		299	50	14.36	33.47		24.96	300	0.15
94	11.62	33.32		261	75	14.34	33.49		24.98	299	0.22
108	10.28	33.46		228	100	11.29	33.34		25.46	254	0.30
122	9.66	33.55		211	150	8.88	33.74		26.17	185	0.40
152	8.84	33.76		183	200	8.27	33.95		26.44	160	0.49
171	8.68	33.86		174	250	7.84	34.05		26.58	147	0.57
199	8.30	33.95		161	300	7.29	34.13		26.72	134	0.64
233	7.98	34.03		150	400	6.54	34.19		26.87	119	0.78
262	7.72	34.07		144	500	5.82	34.24		27.00	107	0.89
311	7.19	34.14		132	600	5.39	34.30		27.10	97	1.00
374	6.73	34.18		122							
472	5.99	34.22		110							
562	5.56	34.28		100							
638	5.18	34.31		94							

a) Pretrip suspected.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
87.80	ORCA; April 20, 1959; 1846 GCT; 32°18'N, 121°47.5'W; sounding, 2000+ fm; wind, 320°, force 3; weather, overcast; sea, high; wire angle, 22°.										
2	14.81	33.42	5.58	314	0	(14.81)	(33.42)	(5.58)	(24.82)	(314)	(0.00)
12	14.78	33.44	5.60	312	10	14.79	33.44	5.60	24.84	312	0.03
31	14.79	33.40	5.52	315	20	14.79	33.43	5.55	24.83	313	0.06
59	14.76	33.40	5.55	315	30	14.79	33.40	5.52	24.81	315	0.09
68	14.72	33.40	5.51	314	50	14.78	33.40	5.54	24.81	315	0.16
82	14.00	33.38	5.49	300	75	14.56	33.40	5.50	24.86	310	0.24
95	12.70	33.30	5.37	282	100	12.12	33.31	5.21	25.28	270	0.31
109	10.93	33.38	4.74	244	150	9.09	33.62	3.72	26.04	198	0.43
132	9.83	33.48	-	220	200	8.52	33.90	2.90	26.35	168	0.52
150	9.09	33.62	3.72	198	250	7.88	34.00	2.14	26.53	152	0.60
177	8.62	33.78	3.51	178	300	7.14	34.06	1.74	26.68	137	0.68
204	8.50	33.91	2.81	167	400	6.30	34.17	0.89	26.88	118	0.81
232	8.17	33.98	2.23	157	500	5.61	34.26	0.45	27.04	103	0.92
277	7.44	34.03	2.02	143							
329	6.80	34.10	1.38	130							
408	6.24	34.18	0.82	116							
490	5.67	34.25	0.47	104							
573	5.32	34.31	0.38	96							
87.90	ORCA; April 21, 1959; 0051 GCT; 32°01'N, 122°27'W; sounding, 2400 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 21°.										
1	15.44	33.44	5.50	326	0	(15.44)	(33.44)	(5.50)	(24.69)	(326)	(0.00)
11	15.40	33.44	5.50	325	10	15.41	33.44	5.50	24.70	325	0.03
30	15.27	33.42	5.48	324	20	15.33	33.43	5.49	24.71	324	0.06
58	15.22	33.44	5.50	321	30	15.27	33.42	5.48	24.71	324	0.10
67	14.35	33.31	5.65	313	50	15.24	33.43	5.49	24.74	322	0.16
81	13.59	33.35	5.72	295	75	13.92	33.33	5.73	24.94	302	0.24
95	12.72	33.31	5.41	281	100	12.50	33.32	5.32	25.21	277	0.31
109	11.41	33.39	4.89	252	150	9.65	33.58	4.30	25.92	209	0.43
132	10.02	33.50	4.43	221	200	8.50	33.88	3.17	26.34	169	0.53
150	9.65	33.58	4.30	209	250	7.79	34.02	2.10	26.56	149	0.61
178	8.71	33.76	3.40	181	300	7.03	34.06	1.67	26.70	136	0.68
206	8.43	33.91	3.10	166	400	6.21	34.13	0.86	26.86	120	0.82
234	8.04	34.00	2.27	154	500	5.52	34.23	0.47	27.04	104	0.93
281	7.26	34.04	1.87	140	600	(5.10)	(34.33)		(27.16)	(92)	(1.04)
333	6.75	34.09	1.32	130							
414	6.10	34.14	0.76	118							
497	5.52	34.23	0.48	104							
582	5.18	34.31	0.29	94							
90.28	ORCA; April 17, 1959; 2058 GCT; 33°28.5'N, 117°47'W; sounding, 148 fm; wind, 230°, force 3; weather, cloudy; sea, slight; wire angle, 05°.										
1	16.28	33.62	5.89	331	0	(16.28)	(33.62)	(5.89)	(24.64)	(331)	(0.00)
11	15.94	33.58	5.89	326	10	16.00	33.59	5.89	24.68	327	0.03
32	12.64	33.58	4.09	260	20	14.50	33.58	5.21	25.01	296	0.06
51	11.30	33.67	3.21	230	30	12.88	33.58	4.21	25.34	264	0.09
76	10.45	33.75	2.96	210	50	11.34	33.66	3.25	25.69	231	0.14
					75	10.47	33.75	2.97	25.92	210	0.20

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; April 17, 1959; 1741 GCT; 33°20.5'N, 118°03.5'W; sounding, 410 fm; wind, 240°, force 2; weather, overcast; sea, slight; wire angle, 09°. 90.32

2	16.90	33.60	5.64	346	0	(16.90)	(33.60)	(5.64)	(24.48)	(346)	(0.00)
12	16.90	33.58	5.64	347	10	16.90	33.58	5.64	24.47	347	0.03
32	15.80	33.59	5.77	322	20	16.72	33.58	5.67	24.52	343	0.07
41	13.90	33.55	5.11	286	30	16.06	33.59	5.75	24.67	328	0.10
51	12.60	33.58	3.94	260	50	12.78	33.57	4.08	25.36	263	0.16
66	11.74	33.65	3.45	238	75	11.47	33.67	3.25	25.68	233	0.22
80	11.26	33.68	3.11	228	100	10.34	33.73	3.17	25.93	208	0.28
100	10.34	33.73	3.17	208	150	9.31	33.95	2.38	26.27	176	0.38
125	9.63	33.84	2.81	190	200	8.73	34.13	1.72	26.51	154	0.46
145	9.38	33.93	2.47	179	250	8.43	34.23	1.20	26.63	142	0.54
174	8.90	34.04	2.09	163	300	8.12	34.25	0.96	26.69	136	0.61
204	8.72	34.14	1.69	153	400	6.84	34.23	0.66	26.86	120	0.74
233	8.50	34.22	1.32	144	500	6.26	34.28	0.50	26.97	110	0.86
273	8.38	34.25	1.07	140							
332	7.68	34.25	0.86	130							
407	6.77	34.23	0.64	119							
482	6.36	34.27	0.52	111							
563	5.86	34.29	0.34	104							

ORCA; April 16, 1959; 1519 GCT; 33°10.5'N, 118°23.5'W; sounding, 645 fm; wind, 210°, force 3; weather, partly cloudy; sea, moderate; wire angle, 12°. 90.37

0	17.30	33.61	5.48	354	0	17.30	33.61	5.48	24.40	354	0.00
9	17.28	33.62	5.53	353	10	17.27	33.62	5.54	24.41	352	0.04
29	16.76	33.62	5.61	342	20	16.83	33.62	5.61	24.52	343	0.07
38	15.09	33.57	5.74	309	30	16.75	33.62	5.62	24.53	341	0.10
49	13.50	33.53	5.24	280	50	13.35	33.53	5.18	25.20	277	0.16
64	11.86	33.57	4.21	247	75	11.40	33.59	4.01	25.63	237	0.23
78	11.28	33.60	3.96	234	100	10.23	33.69	3.41	25.91	210	0.29
97	10.36	33.68	3.48	212	150	9.30	33.96	2.40	26.28	175	0.38
122	9.65	33.81	2.89	192	200	8.82	34.12	1.70	26.48	156	0.47
141	9.34	33.90	2.54	180	250	8.30	34.22	1.30	26.64	141	0.54
171	8.98	34.03	2.07	165	300	7.76	34.23	1.16	26.72	133	0.62
200	8.82	34.12	1.70	156	400	6.76	34.28	0.62	26.91	115	0.74
229	8.54	34.20	1.49	146	500	6.25	34.32	0.46	27.00	106	0.86
268	8.08	34.23	1.20	137							
327	7.52	34.23	1.13	129							
401	6.74	34.28	0.61	115							
475	6.38	34.31	0.49	108							
557	5.90	34.34	0.40	100							

ORCA; April 16, 1959; 0957, 1039 GCT; 32°55'N, 118°56.5'W; sounding, 900 fm; wind, 310°, force 3; weather, cloudy; sea, very rough; wire angle, 06°, 05°. 90.45

2	16.02	33.59	5.62	327	0	(16.02)	(33.59)	(5.62)	(24.68)	(327)	(0.00)
12	16.01	33.61	5.62	326	10	16.02	33.61	5.62	24.70	326	0.03
32	13.62	33.55	5.14	280	20	14.42	33.57	5.39	25.02	295	0.06
42	12.97	33.57	4.73	267	30	13.78	33.55	5.21	25.14	284	0.09
56	11.78	33.58	4.08	244	50	12.40	33.58	4.43	25.42	256	0.15
72	10.64	33.66	3.54	220	75	10.59	33.69	3.47	25.85	216	0.20
96	9.78	33.78	2.98	196	100	9.69	33.80	2.88	26.09	193	0.26
					150	9.02	34.00	2.16	26.36	168	0.35
114	9.42	33.91	2.53	181	200	8.48	34.14	1.74	26.55	150	0.43
134	9.16	33.96	2.40	173	250	8.03	34.15	1.32	26.62	143	0.50
154	8.99	34.02	2.08	166	300	7.66	34.23	1.15	26.74	132	0.57
183	8.70	34.11	1.89	155	400	6.72	34.23	0.72	26.88	119	0.70
217	8.27	34.15	1.55	146	500	6.15	34.29	0.50	27.00	107	0.82
248	8.04	34.15	1.32	143	600	5.59	34.34	0.41	27.10	97	0.93
297	7.69	34.23	1.16	132							
352	7.08	34.22	0.94	124							
437	6.51	34.25	0.55	115							
523	6.00	34.30	0.49	104							
609	5.54	34.34	0.40	96							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
90.50	ORCA; April 16, 1959; 0625 GCT; 32°44.5'N, 119°16.5'W; sounding, 180 fm; wind, 310°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.										
1	15.34	33.58	5.62	314	0	(15.34)	(33.58)	(5.62)	(24.82)	(314)	(0.00)
11	15.34	33.58	5.62	314	10	15.34	33.58	5.62	24.82	314	0.03
31	13.66	33.57	5.38	280	20	15.34	33.58	5.62	24.82	314	0.06
51	11.86	33.57	4.60	247	30	14.00	33.57	5.46	25.10	287	0.09
					50	11.87	33.57	4.61	25.52	247	0.15
90.55	ORCA; April 16, 1959; 0259 GCT; 32°35.5'N, 119°35.5'W; sounding, 505 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 35°.										
2	15.02	33.57	5.86	308	0	(15.02)	(33.57)	(5.86)	(24.88)	(308)	(0.00)
10	15.02	33.58	5.86	307	10	15.02	33.58	5.86	24.89	307	0.03
26	14.60	33.54	5.58	301	20	14.98	33.58	5.84	24.90	306	0.06
50	14.43	33.53	5.44	298	30	14.57	33.54	5.53	24.96	300	0.09
58	13.80	33.53	5.30	286	50	14.43	33.53	5.44	24.98	298	0.15
69	12.52	33.55	4.86	260	75	12.02	33.56	4.50	25.49	250	0.22
81	11.60	33.58	4.33	241	100	10.82	33.69	3.62	25.81	220	0.28
94	11.02	33.68	3.75	224	150	9.36	33.88	2.54	26.21	182	0.38
112	10.37	33.71	3.31	210	200	8.74	34.06	1.95	26.45	159	0.47
126	10.02	33.80	2.91	199	250	7.98	34.12	1.57	26.62	144	0.54
149	9.40	33.88	2.57	183	300	7.38	34.15	1.22	26.72	133	0.62
170	8.93	33.96	2.31	170	400	6.90	34.26	0.68	26.88	118	0.75
193	8.79	34.04	2.02	162	500	(6.28)	(34.30)		(26.99)	(108)	(0.86)
227	8.56	34.14	1.60	151							
267	7.54	34.11	1.54	138							
328	7.26	34.20	0.92	128							
394	6.92	34.26	0.69	119							
468	6.48	34.29	0.54	111							
90.60	ORCA; April 15, 1959; 2324 GCT; 32°24.5'N, 119°57.5'W; sounding, 500 fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 25°.										
3	15.26	33.54	5.47	315	0	(15.26)	(33.54)	(5.47)	(24.81)	(315)	(0.00)
12	15.22	33.54	5.52	314	10	15.22	33.54	5.51	24.82	314	0.03
31	15.22	33.57	5.60	312	20	15.22	33.55	5.56	24.83	313	0.06
58	14.71	33.53	5.54	304	30	15.22	33.57	5.60	24.84	312	0.09
66	14.34	33.51	5.43	297	50	15.11	33.56	5.60	24.86	310	0.16
79	13.70	33.45	5.22	290	75	13.91	33.47	5.31	25.05	292	0.23
92	12.30	33.37	4.91	269	100	11.30	33.41	4.63	25.51	248	0.30
106	10.75	33.47	4.38	235	150	9.56	33.77	3.27	26.08	194	0.41
126	10.02	33.68	3.60	208	200	8.86	33.97	2.43	26.35	168	0.50
144	9.68	33.75	3.37	197	250	8.18	34.06	1.79	26.53	151	0.58
171	9.16	33.84	2.89	182	300	7.73	34.12	1.36	26.64	140	0.66
197	8.90	33.96	2.47	169	400	6.83	34.22	0.74	26.85	121	0.79
225	8.50	34.00	2.09	160	500	6.26	34.26	0.48	26.96	111	0.92
270	7.97	34.09	1.60	146							
319	7.59	34.13	1.26	138							
398	6.84	34.22	0.75	121							
480	6.36	34.25	0.50	112							
565	5.93	34.29	0.44	104							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
ORCA; April 15, 1959; 1513 GCT; 32°01'N, 120°38'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 15°.											90.70
1	15.24	33.47	5.53	319	0	(15.24)	(33.47)	(5.53)	(24.76)	(319)	(0.00)
10	15.22	33.42	5.55	322	10	15.22	33.42	5.55	24.74	322	0.03
29	15.24	33.41	5.53	324	20	15.23	33.42	5.54	24.73	323	0.06
39	15.08	33.39	5.48	322	30	15.24	33.41	5.53	24.72	324	0.10
54	14.42	33.39	5.56	308	50	14.88	33.39	5.52	24.78	318	0.16
68	13.75	33.33	5.51	300	75	13.29	33.33	5.44	25.07	291	0.24
92	11.78	33.33	5.09	263	100	11.20	33.37	4.77	25.50	250	0.30
112	10.52	33.47	4.19	231	150	9.25	33.69	3.45	26.07	195	0.42
131	9.88	33.60	3.61	211	200	8.53	33.92	2.46	26.37	166	0.51
151	9.22	33.70	3.44	193	250	7.98	34.10	1.83	26.60	145	0.59
180	8.82	33.87	2.81	175	300	7.49	34.13	1.38	26.69	136	0.66
214	8.36	33.97	2.23	160	400	6.63	34.19	0.82	26.86	120	0.79
243	8.04	34.09	1.91	147	500	5.89	34.28	0.38	27.02	105	0.91
292	7.58	34.13	1.44	137	600	5.40	34.34	0.32	27.13	94	1.02
346	7.08	34.15	1.08	129							
430	6.38	34.22	0.68	115							
514	5.80	34.29	0.36	103							
601	5.38	34.34	0.32	94							
ORCA; April 15, 1959; 0839 GCT; 31°43'N, 121°18.5'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 17°.											90.80
2	16.08	33.51	5.47	334	0	(16.08)	(33.51)	(5.47)	(24.60)	(334)	(0.00)
12	16.09	33.58	5.42	329	10	16.09	33.58	5.43	24.66	329	0.03
31	16.10	33.58	5.35	329	20	16.10	33.58	5.39	24.66	329	0.07
60	16.10	33.58	5.38	329	30	16.10	33.58	5.36	24.66	329	0.10
70	16.07	33.58	5.48	329	50	16.10	33.58	5.37	24.66	329	0.16
84	16.02	33.58	5.45	328	75	16.04	33.58	5.47	24.66	329	0.25
98	14.84	33.46	5.50	312	100	14.68	33.46	5.49	24.88	308	0.33
112	13.40	33.46	5.26	283	150	10.30	33.57	4.35	25.80	220	0.46
135	11.32	33.43	4.73	247	200	8.81	33.81	3.23	26.24	179	0.56
153	9.80	33.53	4.28	215	250	8.09	33.97	2.33	26.47	157	0.65
181	9.16	33.73	3.80	190	300	7.39	34.04	1.83	26.63	142	0.73
209	8.64	33.85	2.88	173	400	6.45	34.11	1.01	26.82	124	0.87
236	8.31	33.93	2.49	163	500	5.84	34.18	0.53	26.95	112	0.99
283	7.56	34.02	2.02	146	600	(5.38)	(34.27)		(27.07)	(100)	(1.10)
335	7.06	34.07	1.49	135							
417	6.32	34.12	0.91	122							
498	5.85	34.18	0.54	112							
583	5.46	34.25	0.37	102							
ORCA; April 14-15, 1959; 2338, 0050 GCT; 31°23'N, 122°03.5'W; sounding, 2000 fm; wind, 330°, force 2; weather, overcast; sea, high; wire angle, 12°, 10°.											90.90
1	16.15	33.50	5.44	336	0	(16.15)	(33.50)	(5.44)	(24.58)	(336)	(0.00)
11	16.11	33.52	5.44	334	10	16.12	33.52	5.44	24.61	334	0.03
31	16.05	33.51	5.45	334	20	16.08	33.52	5.45	24.61	334	0.07
60	16.04	33.51	5.45	334	30	16.06	33.51	5.45	24.62	334	0.10
70	16.00	33.48	5.50	335	50	16.04	33.51	5.45	24.62	334	0.17
85	15.12	33.40	5.53	322	75	16.00	33.48	5.51	24.60	335	0.25
99	14.60	33.50	5.24	304	100	14.57	33.50	5.23	24.93	303	0.33
114	12.86	33.43	5.02	275	150	10.78	33.57	4.56	25.72	228	0.46
139	11.58	33.59	4.72	240	200	9.12	33.72	3.77	26.12	190	0.57
160	10.00	33.56	4.36	216	250	8.22	33.95	2.88	26.44	160	0.66
190	9.33	33.66	3.95	198	300	7.52	34.03	2.20	26.61	144	0.74
219	8.73	33.86	3.38	174							
249	8.24	33.95	2.91	160							
298	7.54	34.03	2.21	144							
353	6.86	34.09	1.56	131							
3282a)	1.60	34.65	2.78								
3381	1.56	34.62	2.79								
3480	1.56	34.63	2.80								

a) Special cast for aluminum.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T}{}^{-5}{}_{3}$	Z	T	S	O_2	σ_t	$\delta_{T}{}^{-5}{}_{3}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.28 ORCA; April 13, 1959; 0129 GCT; 32°54.5'N, 117°22'W; sounding, 324 fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 12°.

0	17.52	33.57	5.78	362	0	17.52	33.57	5.78	24.31	362	0.00
10	16.46	33.55	6.47	340	10	16.46	33.55	6.47	24.55	340	0.04
30	13.20	33.55	4.02	273	20	14.74	33.55	5.17	24.93	303	0.07
40	12.18	33.57	3.85	252	30	13.20	33.55	4.02	25.25	273	0.10
49	11.44	33.59	3.71	238	50	11.42	33.59	3.70	25.62	238	0.15
64	10.86	33.68	3.18	221	75	10.71	33.70	3.11	25.84	217	0.20
79	10.64	33.71	3.09	216	100	10.09	33.84	2.72	26.05	197	0.26
98	10.18	33.82	2.77	200	150	9.08	33.96	2.26	26.31	172	0.35
121	9.64	33.90	2.54	185	200	8.88	34.15	1.62	26.49	155	0.43
140	9.24	33.91	2.43	178	250	8.78	34.26	1.07	26.60	145	0.51
169	8.92	34.05	1.96	163							
197	8.82	34.11	1.77	157							
225	9.06	34.27	1.15	149							
263	8.58	34.25	1.06	143							

93.30 ORCA; April 13, 1959; 0343 GCT; 32°50'N, 117°31.5'W; sounding, 400 fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 06°.

0	17.44	33.58	5.43	360	0	17.44	33.58	5.43	24.34	360	0.00
10	16.52	33.57	5.85	339	10	16.52	33.57	5.85	24.56	339	0.04
29	14.78	33.55	5.72	304	20	16.17	33.56	5.85	24.63	332	0.07
39	14.45	33.54	5.55	298	30	14.72	33.55	5.70	24.94	303	0.10
49	13.46	33.55	4.31	278	50	13.35	33.55	4.24	25.22	276	0.16
63	11.77	33.64	-	240	75	11.13	33.68	3.60	25.75	226	0.22
78	10.98	33.69	3.51	223	100	10.36	33.78	3.04	25.96	206	0.28
99	10.38	33.77	3.06	206	150	9.33	34.00	2.22	26.31	172	0.37
123	9.49	33.89	2.79	183	200	9.19	34.23	1.32	26.50	154	0.45
143	9.38	33.98	2.32	175	250	8.60	34.28	1.02	26.64	141	0.53
172	9.10	34.07	1.99	164	300	8.35	34.28	0.90	26.67	138	0.60
202	9.14	34.23	1.27	153	400	7.41	34.25	0.74	26.79	127	0.74
232	8.71	34.26	1.10	144	500	6.31	34.28	0.39	26.96	110	0.86
271	8.51	34.29	0.96	139							
331	8.15	34.25	0.85	137							
405	7.34	34.25	0.73	126							
481	6.44	34.27	0.45	112							
561	6.02	34.30	0.31	105							

93.40 ORCA; April 13, 1959; 0957 GCT; 32°29.5'N, 118°13.5'W; sounding, 800 fm; wind, 260°, force 1; weather, fog; sea, moderate; wire angle, 04°.

1	16.47	33.63	5.43	334	0	(16.47)	(33.63)	(5.43)	(24.61)	(334)	(0.00)
11	15.78	33.57	5.61	324	10	15.84	33.57	5.59	24.71	325	0.03
31	14.33	33.57	5.44	293	20	15.30	33.57	5.61	24.83	313	0.06
41	14.04	33.58	5.16	287	30	14.36	33.57	5.46	25.03	294	0.10
56	13.32	33.58	4.28	273	50	13.70	33.58	4.63	25.18	280	0.15
71	11.94	33.55	4.22	250	75	11.70	33.56	4.12	25.55	244	0.22
97	10.94	33.62	3.72	227	100	10.45	33.62	3.54	25.82	218	0.28
117	9.88	33.74	3.19	201	150	9.28	33.90	2.45	26.24	179	0.38
137	9.49	33.82	2.58	189	200	8.63	34.07	1.77	26.47	157	0.46
157	9.18	33.94	2.37	175	250	8.06	34.12	1.41	26.60	145	0.54
186	8.79	34.05	1.85	161	300	7.57	34.17	1.14	26.70	135	0.61
221	8.40	34.09	1.65	152	400	6.92	34.23	0.75	26.85	121	0.74
251	8.04	34.12	1.40	145	500	6.23	34.29	0.42	26.99	108	0.86
301	7.56	34.17	1.14	135	600	5.53	34.34	0.37	27.12	96	0.97
355	7.22	34.22	0.97	126							
441	6.64	34.24	0.60	117							
528	6.01	34.32	0.39	104							
613	5.46	34.34	0.37	95							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	
ORCA; April 13, 1959; 1600 GCT; 32°10'N, 118°52'W; sounding, 730 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 18°.												93.50
3	15.20	33.58	5.72	310	0	(15.20)	(33.58)	(5.72)	(24.86)	(310)	(0.00)	
12	15.18	33.58	5.63	310	10	15.19	33.58	5.64	24.86	310	0.03	
31	13.82	33.56	5.56	284	20	15.17	33.58	5.62	24.86	310	0.06	
41	13.26	33.58	5.40	271	30	14.00	33.56	5.57	25.10	287	0.09	
56	12.94	33.59	5.11	265	50	13.07	33.59	5.24	25.31	267	0.15	
70	11.72	33.58	4.21	243	75	11.22	33.63	3.90	25.69	231	0.21	
93	10.36	33.76	3.40	207	100	10.16	33.76	3.34	25.98	203	0.26	
112	9.84	33.77	3.23	198	150	8.84	33.95	2.31	26.34	169	0.36	
131	9.30	33.86	2.81	183	200	8.49	34.00	2.01	26.44	160	0.44	
149	8.86	33.95	2.32	169								
176	8.66	33.97	2.17	165								
209	8.40	34.02	1.93	158								
237	8.02	34.11	1.60	145								
ORCA; April 13, 1959; 2218 GCT; 31°50'N, 119°33'W; sounding, 1220 fm; wind, 300°, force 3; weather, cloudy; sea, very rough; wire angle, 07°.												93.60
2	15.84	33.55	5.62	326	0	(15.84)	(33.55)	(5.62)	(24.69)	(326)	(0.00)	
12	15.60	33.58	5.62	320	10	15.63	33.58	5.62	24.76	320	0.03	
37	15.50	33.55	5.61	319	20	15.54	33.57	5.62	24.77	319	0.06	
47	15.00	33.53	5.62	310	30	15.52	33.56	5.62	24.77	319	0.10	
62	13.38	33.34	5.38	292	50	14.72	33.49	5.60	24.90	306	0.16	
77	12.54	33.31	5.12	278	75	12.58	33.31	5.13	25.19	279	0.23	
102	10.56	33.51	4.09	229	100	10.68	33.49	4.17	25.68	232	0.30	
121	9.96	33.63	3.73	210	150	9.44	33.70	3.55	26.05	196	0.40	
141	9.58	33.68	3.63	200	200	8.69	33.95	2.36	26.36	167	0.50	
171	8.99	33.82	3.05	181	250	8.19	34.13	1.67	26.58	146	0.58	
202	8.65	33.95	2.35	166	300	7.85	34.20	1.17	26.69	136	0.65	
241	8.22	34.11	1.80	148	400	6.54	34.18	0.86	26.86	120	0.78	
271	8.10	34.15	1.47	143	500	6.01	34.25	0.46	26.98	109	0.90	
320	7.58	34.22	1.02	131	600	5.53	34.30	0.33	27.08	99	1.01	
385	6.68	34.18	0.93	122								
487	6.08	34.25	0.48	110								
577	5.63	34.29	0.36	101								
652	5.29	34.34	0.26	93								
ORCA; April 14, 1959; 0443 GCT; 31°30'N, 120°13.5'W; sounding, 2000 fm; wind, 310°, force 4; weather, cloudy; sea, very rough; wire angle, 26°.												93.70
2	15.83	33.56	5.45	326	0	(15.83)	(33.56)	(5.45)	(24.70)	(326)	(0.00)	
11	15.84	33.56	5.55	326	10	15.84	33.56	5.54	24.70	326	0.03	
29	15.60	33.53	5.54	322	20	15.74	33.55	5.54	24.71	324	0.06	
56	14.92	33.37	5.55	320	30	15.58	33.53	5.54	24.74	322	0.10	
65	14.78	33.36	5.63	318	50	15.07	33.40	5.55	24.75	321	0.16	
77	14.12	33.33	5.70	307	75	14.30	33.33	5.70	24.86	310	0.24	
90	13.02	33.31	5.35	287	100	12.24	33.31	5.14	25.25	273	0.31	
104	11.94	33.31	5.07	267	150	9.38	33.64	3.77	26.02	200	0.43	
125	10.34	33.49	4.37	226	200	8.52	33.93	2.73	26.39	165	0.52	
141	9.58	33.58	3.99	208	250	7.62	34.01	2.21	26.57	147	0.60	
167	9.07	33.75	3.35	188	300	7.04	34.07	1.65	26.70	135	0.68	
191	8.70	33.89	2.81	171	400	6.34	34.15	0.81	26.86	120	0.81	
217	8.19	33.98	2.60	157	500	5.80	34.26	0.46	27.02	105	0.93	
259	7.49	34.02	2.10	144								
306	6.99	34.08	1.57	133								
382	6.44	34.13	0.92	123								
462	5.98	34.22	0.55	110								
543	5.62	34.30	0.38	100								

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T_3^{-5}}$	Z	T	S	O_2	σ_t	$\delta_{T_3^{-5}}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.80 ORCA; April 14, 1959; 1126 GCT; 31°11.5'N, 120°54'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 09°.

1	15.71	33.50	5.51	327	0	(15.71)	(33.50)	(5.51)	(24.68)	(327)	(0.00)
11	15.72	33.49	5.60	328	10	15.72	33.49	5.59	24.68	328	0.03
31	15.74	33.48	5.48	329	20	15.73	33.48	5.56	24.67	328	0.06
60	15.70	33.49	5.48	328	30	15.74	33.48	5.49	24.66	329	0.10
71	15.20	33.39	5.63	324	50	15.72	33.48	5.48	24.67	328	0.16
85	14.95	33.36	5.68	321	75	15.04	33.37	5.65	24.73	323	0.24
100	14.24	33.33	5.44	309	100	14.24	33.33	5.44	24.87	309	0.33
115	13.24	33.26	5.46	295	150	10.48	33.45	4.57	25.68	232	0.46
139	10.96	33.37	4.60	246	200	8.99	33.74	3.63	26.16	186	0.57
159	10.14	33.55	4.55	219	250	8.16	33.97	2.60	26.46	158	0.66
188	9.22	33.68	3.92	195	300	7.39	34.05	1.89	26.64	141	0.74
218	8.69	33.85	3.21	174	400	6.51	34.13	1.02	26.82	124	0.87
248	8.20	33.96	2.64	159	500	5.90	34.24	0.52	26.98	108	1.00
297	7.42	34.05	1.92	142	600	5.39	34.29	0.38	27.09	98	1.11
352	6.88	34.07	1.49	133							
436	6.27	34.18	0.72	117							
522	5.78	34.25	0.47	106							
608	5.34	34.29	0.37	98							

93.90 ORCA; April 14, 1959; 1735 GCT; 30°52'N, 121°35'W; sounding, 2245 fm; wind, 320°, force 4; weather; cloudy; sea, very rough; wire angle, 10°.

2	16.36	33.59	5.45	334	0	(16.36)	(33.59)	(5.45)	(24.61)	(334)	(0.00)
12	16.34	33.62	5.44	332	10	16.34	33.62	5.44	24.63	332	0.03
31	16.34	33.62	5.38	332	20	16.34	33.62	5.42	24.63	332	0.07
60	16.24	33.55	5.40	335	30	16.34	33.62	5.38	24.63	332	0.10
70	16.05	33.53	5.52	332	50	16.30	33.58	5.39	24.62	333	0.17
84	16.54	33.80	5.41	323	75	16.20	33.62	5.49	24.66	329	0.25
99	15.35	33.65	5.44	309	100	15.32	33.64	5.44	24.88	308	0.33
113	14.01	33.59	5.30	286	150	11.28	33.58	4.70	25.64	236	0.47
138	11.94	33.57	4.87	248	200	9.08	33.81	3.57	26.19	183	0.58
158	10.88	33.60	4.58	228	250	8.14	33.97	2.52	26.47	157	0.67
187	9.44	33.74	3.88	194	300	7.51	33.98	2.06	26.57	148	0.74
217	8.70	33.89	3.09	172	400	6.52	34.11	1.12	26.81	125	0.89
247	8.18	33.97	2.54	158	500	5.91	34.17	0.62	26.94	113	1.01
296	7.55	33.98	2.08	149	600	5.42	34.30	0.39	27.09	98	1.12
351	6.96	34.07	1.58	134							
435	6.28	34.13	0.85	121							
528	5.76	34.20	0.55	109							
607	5.38	34.31	0.38	96							

97.30 ORCA; April 11, 1959; 1952 GCT; 32°15.5'N, 117°08.5'W; sounding, 35 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.

2	15.85	33.55	6.11	326	0	(15.85)	(33.55)	(6.11)	(24.69)	(326)	(0.00)
12	14.82	33.55	6.07	305	10	15.03	33.54	6.09	24.86	310	0.03
31	11.56	33.64	3.64	236	20	13.87	33.58	5.87	25.14	284	0.06
52	11.20	33.73	3.23	223	30	11.60	33.64	3.68	25.62	237	0.09
					50	11.22	33.73	3.27	25.76	224	0.13

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

PAOLINA-T; April 8, 1959; 0104 GCT;[a] 32°12'N, 117°14.5'W; sounding, 750 fm; wind, 220°, force 2; weather, cloudy; sea, moderate; wire angle, 00°. 97.32

426	6.82	34.28		116
436	6.82	34.27		117
447	6.80	34.29		115
457	6.76	34.32		112
467	6.70	34.29		114
478	6.70	34.32		112
488	6.56	34.28		113
499	6.50	34.32		110
509	6.50	34.27		113
520	6.38	34.31		108
530	6.32	34.30		108
540	6.26	34.33		106
550	6.21	34.27		110
561	6.16	34.32		105
572	6.06	34.26		108
582	6.12	34.32		104
593	5.92	34.24		108
603	5.86	34.29		104

STRANGER; April 8, 1959; 0155, 0238 GCT;[b] 32°13'N, 117°16'W; sounding, 740 fm; wind, 290°, force 1; weather, overcast; sea, moderate; wire angle, 00°, 01°. 97.32

425	6.94	34.27	0.30	119
435	6.87	34.27	0.15	118
445	6.71	34.25	0.12	117
456	6.78	34.31	0.11	113
466	6.66	34.29	0.11	113
476	6.64	34.31	0.08	112
486	6.61	34.32	0.09	111
496	6.50	34.29	0.10	111
506	6.44	34.31	0.13	109
516	6.38	34.31	0.20	108
528	6.32	34.29	0.24	109
538	6.29	34.31	0.26	107
548	6.18	34.29	0.25	107
558	6.09	34.34	0.28	103
568	6.07	34.34	0.28	102
578	5.99	34.31	0.28	104
588	5.92	34.32	0.29	102
598	5.82	34.34	0.28	100

a) Test cast.
b) Test casts.

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5904

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T,3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T,3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m
97.32	ORCA; April 11, 1959; 1805 GCT; 32°11'N, 117°16'W; sounding, 750 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 27°.										
3	16.77	33.58	5.67	344	0	(16.77)	(33.58)	(5.67)	(24.50)	(344)	(0.00)
11	16.42	33.58	5.33	337	10	16.48	33.58	5.37	24.57	338	0.03
29	12.28	33.58	3.99	254	20	13.70	33.58	4.43	25.18	280	0.06
38	11.74	33.64	3.64	239	30	12.22	33.58	3.95	25.47	252	0.09
47	11.25	33.67	3.45	229	50	11.16	33.69	3.37	25.74	226	0.14
59	10.94	33.76	3.04	217	75	10.69	33.81	2.91	25.93	209	0.19
72	10.72	33.80	2.93	210	100	10.00	33.89	2.71	26.10	192	0.24
89	10.36	33.86	2.80	200	150	9.28	34.01	2.34	26.32	171	0.34
111	9.69	33.91	2.62	185	200	8.51	34.09	1.94	26.50	154	0.42
128	9.48	33.95	2.46	179	250	8.14	34.15	1.62	26.61	144	0.49
154	9.10	34.00	2.30	170	300	7.62	34.20	1.22	26.72	133	0.56
180	8.74	34.04	2.07	161	400	6.97	34.25	0.68	26.86	120	0.70
207	8.44	34.10	1.89	152	500	6.25	34.31	0.42	27.00	107	0.82
243	8.20	34.14	1.68	146							
297	7.64	34.20	1.23	134							
367	7.22	34.23	0.82	126							
438	6.68	34.28	0.56	114							
515	6.16	34.31	0.40	106							
97.40	ORCA; April 11, 1959; 1306 GCT; 31°56.5'N, 117°44'W; sounding, 378 fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.										
2	17.00	33.56	5.40	351	0	(17.00)	(33.56)	(5.40)	(24.43)	(351)	(0.00)
12	17.00	33.57	5.40	350	10	17.00	33.57	5.40	24.44	350	0.04
31	16.08	33.55	5.48	332	20	16.90	33.57	5.41	24.46	348	0.07
41	14.44	33.49	5.56	301	30	16.24	33.55	5.46	24.60	335	0.10
55	12.80	33.55	4.43	265	50	13.28	33.53	4.79	25.22	276	0.16
70	11.97	33.58	3.95	248	75	11.52	33.60	3.76	25.62	238	0.23
95	10.93	33.68	3.47	223	100	10.70	33.69	3.33	25.83	218	0.29
115	10.48	33.79	3.00	207	150	9.85	34.09	2.21	26.28	175	0.39
135	9.90	33.85	2.80	193	200	8.67	34.00	1.89	26.42	162	0.47
155	9.76	34.09	2.17	173	250	8.19	34.15	1.60	26.60	145	0.55
184	8.94	34.04	2.13	164	300	7.69	34.20	1.14	26.72	134	0.62
219	8.44	33.98	1.72	161	400	6.90	34.26	0.75	26.88	119	0.76
249	8.20	34.14	1.61	146	500	6.16	34.32	0.41	27.02	105	0.87
298	7.71	34.20	1.16	134	600	5.61	34.34	0.35	27.10	97	0.98
352	7.32	34.23	0.92	127							
437	6.57	34.28	0.61	113							
523	6.05	34.33	0.37	103							
608	5.58	34.34	0.35	96							
97.50	ORCA; April 11, 1959; 0627 GCT; 31°35.5'N, 118°27.5'W; sounding, 1300 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 14°.										
2	16.32	33.62	5.45	331	0	(16.32)	(33.62)	(5.45)	(24.64)	(331)	(0.00)
12	16.33	33.62	5.37	331	10	16.33	33.62	5.37	24.64	331	0.03
31	16.05	33.60	5.27	327	20	16.25	33.62	5.29	24.65	330	0.07
61	13.81	33.55	4.94	285	30	16.06	33.60	5.27	24.68	327	0.10
70	12.82	33.53	4.46	267	50	15.41	33.58	5.18	24.81	315	0.16
85	12.08	33.55	4.15	252	75	12.52	33.54	4.30	25.38	261	0.24
100	11.28	33.57	3.92	237	100	11.28	33.57	3.92	25.63	237	0.30
115	10.66	33.64	3.61	221	150	9.48	33.77	2.99	26.10	192	0.41
139	9.94	33.73	3.21	203	200	8.60	34.10	1.77	26.50	155	0.50
158	9.37	33.87	2.75	183	250	8.15	34.19	1.29	26.63	142	0.57
187	8.71	34.06	1.93	159	300	7.82	34.22	1.13	26.71	134	0.64
217	8.46	34.13	1.61	150	400	6.99	34.24	0.70	26.85	121	0.78
246	8.19	34.18	1.30	143	500	6.31	34.27	0.47	26.96	110	0.90
296	7.86	34.22	1.16	135	600	5.69	34.33	0.33	27.08	99	1.01
350	7.38	34.24	0.89	127							
433	6.74	34.25	0.58	118							
519	6.18	34.28	0.43	108							
605	5.66	34.33	0.31	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

ORCA; April 10, 1959; 2340 GCT; 31°16'N, 119°09.5'W; sounding, 1950 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 17°. 97.60

1	15.96	33.58	5.47	326	0	(15.96)	(33.58)	(5.47)	(24.69)	(326)	(0.00)
11	15.94	33.58	5.45	326	10	15.94	33.58	5.45	24.69	326	0.03
29	15.87	33.55	5.43	327	20	15.91	33.56	5.44	24.69	326	0.06
58	15.50	33.56	5.50	318	30	15.86	33.55	5.43	24.68	327	0.10
67	14.94	33.57	5.22	306	50	15.68	33.55	5.49	24.73	322	0.16
82	13.62	33.54	4.71	281	75	14.60	33.56	5.07	24.97	300	0.24
96	12.00	33.57	4.29	249	100	11.36	33.59	4.06	25.63	236	0.31
111	11.06	33.60	3.94	230	150	9.66	33.77	3.08	26.06	195	0.42
135	10.08	33.68	3.46	209	200	8.87	34.00	2.04	26.38	166	0.51
154	9.54	33.80	2.93	191	250	8.22	34.12	1.76	26.57	148	0.59
182	9.10	33.93	2.08	175	300	7.80	34.15	1.38	26.66	139	0.67
211	8.72	34.04	2.02	161	400	7.07	34.25	0.74	26.84	122	0.80
239	8.37	34.11	1.84	150	500	6.33	34.31	0.42	26.98	108	0.92
287	7.88	34.14	1.46	141	600	(5.70)	(34.31)	(0.37)	(27.07)	(100)	(1.03)
340	7.54	34.18	1.14	134							
422	6.88	34.27	0.61	118							
506	6.29	34.31	0.41	107							
590	5.76	34.31	0.37	101							

ORCA; April 10, 1959; 2001 GCT; 31°05'N, 119°31'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 08°. 97.65

2	16.36	33.66	5.40	329	0	(16.36)	(33.66)	(5.40)	(24.66)	(329)	(0.00)
12	16.34	33.66	5.39	328	10	16.35	33.66	5.39	24.66	329	0.03
50	16.31	33.66	5.37	328	20	16.34	33.66	5.38	24.67	328	0.06
56	16.20	33.67	5.34	325	30	16.33	33.66	5.38	24.67	328	0.10
61	16.17	33.66	5.45	325	50	16.31	33.66	5.37	24.67	328	0.16
66	16.10	33.68	5.36	323	75	14.67	33.58	5.10	24.97	300	0.24
71	15.13	33.58	5.21	309	100	11.85	33.58	4.19	25.54	246	0.31
76	14.54	33.58	5.07	297	150	9.69	33.78	3.23	26.08	195	0.42
81	13.80	33.57	4.89	283	200	8.76	33.95	2.54	26.36	168	0.51
86	13.32	33.55	4.62	275							
91	12.84	33.58	4.49	264							
96	12.32	33.57	4.31	255							
101	11.74	33.58	4.17	244							
106	11.16	33.58	3.96	234							
111	10.83	33.64	3.81	224							
116	10.67	33.64	3.80	221							
152	9.58	33.80	3.16	192							
202	8.70	33.96	2.50	166							

ORCA; April 10, 1959; 1549 GCT; 30°55.5'N, 119°54.5'W; sounding, 1900 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 24°. 97.70

1	15.88	33.55	5.40	327	0	(15.88)	(33.55)	(5.40)	(24.68)	(327)	(0.00)
10	15.87	33.55	5.43	327	10	15.87	33.55	5.43	24.68	327	0.03
28	15.82	33.51	5.48	328	20	15.84	33.51	5.45	24.67	328	0.06
56	15.65	33.54	5.56	323	30	15.80	33.51	5.49	24.66	328	0.10
65	15.57	33.53	5.57	322	50	15.70	33.53	5.54	24.71	324	0.16
78	14.27	33.40	5.53	305	75	15.15	33.48	5.57	24.80	316	0.24
92	12.20	33.30	5.14	273	100	11.48	33.35	4.90	25.42	256	0.32
105	11.08	33.39	4.75	246	150	9.21	33.71	3.54	26.10	192	0.43
127	9.91	33.58	4.12	213	200	8.24	33.97	2.52	26.45	158	0.52
144	9.35	33.69	3.63	196	250	7.75	34.08	1.87	26.62	143	0.59
170	8.80	33.84	3.13	177	300	6.94	34.08	1.48	26.73	132	0.67
197	8.30	33.97	2.56	160	400	6.38	34.21	0.83	26.90	116	0.79
223	7.82	34.01	2.21	150	500	6.08	34.28	0.47	27.00	107	0.91
269	7.41	34.07	1.70	140							
318	6.79	34.11	1.36	128							
396	6.39	34.20	0.85	117							
476	6.20	34.27	0.54	109							
559	5.68	34.31	0.34	100							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m
97.80	ORCA; April 10, 1959; 0907 GCT; 30°36'N, 120°32.5'W; sounding, 2000 fm; wind, 290°, force 4; weather, cloudy; sea, rough; wire angle, 15°.										
2	15.90	33.44	5.43	335	0	(15.90)	(33.44)	(5.43)	(24.60)	(335)	(0.00)
11	15.88	33.46	5.40	334	10	15.89	33.46	5.40	24.61	334	0.03
30	15.65	33.42	5.50	332	20	15.87	33.46	5.41	24.62	334	0.07
60	15.53	33.47	5.45	325	30	15.65	33.42	5.50	24.63	332	0.10
70	15.43	33.42	5.33	327	50	15.54	33.47	5.46	24.70	326	0.17
85	15.36	33.45	5.47	323	75	15.41	33.42	5.35	24.69	327	0.25
99	14.34	33.48	5.40	300	100	14.30	33.48	5.40	24.97	300	0.33
114	12.78	33.42	5.20	274	150	9.91	33.51	4.30	25.82	219	0.46
138	10.66	33.48	4.41	232	200	8.79	33.81	3.16	26.24	178	0.56
157	9.87	33.59	4.22	212	250	8.12	33.99	2.47	26.49	156	0.65
186	9.10	33.75	3.60	188	300	7.32	34.05	1.83	26.65	140	0.72
214	8.58	33.86	2.88	172							
243	8.22	33.98	2.55	158							
291	7.42	34.04	1.94	142							
345	6.84	34.13	1.27	128							
97.90	ORCA; April 10, 1959; 0250 GCT; 30°16.5'N, 121°09.5'W; sounding, 2000 fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 16°.										
1	16.17	33.51	5.42	336	0	(16.17)	(33.51)	(5.42)	(24.59)	(336)	(0.00)
10	16.18	33.49	5.40	338	10	16.18	33.49	5.40	24.57	338	0.03
29	16.05	33.48	5.38	336	20	16.11	33.48	5.38	24.58	337	0.07
58	15.90	33.51	5.43	331	30	16.04	33.48	5.38	24.59	336	0.10
68	15.88	33.53	5.45	328	50	15.93	33.50	5.41	24.63	332	0.17
82	15.82	33.49	5.45	330	75	15.86	33.51	5.45	24.66	329	0.25
97	15.85	33.48	5.41	332	100	15.98	33.50	5.41	24.63	332	0.34
111	15.49	33.55	5.40	318	150	11.18	33.55	4.61	25.64	236	0.48
136	12.30	33.54	4.76	257	200	9.12	33.73	3.53	26.12	190	0.59
155	10.68	33.57	4.42	226	250	8.29	33.92	2.60	26.41	163	0.68
184	9.46	33.66	3.79	200	300	7.56	34.03	2.06	26.59	145	0.76
212	8.90	33.78	3.33	183	400	6.59	34.12	0.96	26.81	125	0.90
241	8.42	33.89	2.72	168	500	5.99	34.23	0.46	26.97	110	1.02
289	7.69	34.01	2.20	148	600	(5.42)	(34.31)	(0.34)	(27.10)	(97)	(1.13)
342	7.10	34.07	1.46	136							
427	6.39	34.15	0.79	120							
511	5.92	34.24	0.45	108							
596	5.44	34.31	0.34	98							
100.30	ORCA; April 8, 1959; 0658 GCT; 30°40.5'N, 116°46.5'W; sounding, 240 fm; wind, calm; weather, overcast; sea, slight; wire angle, 05°.										
2	15.40	33.58	5.88	315	0	(15.40)	(33.58)	(5.88)	(24.81)	(315)	(0.00)
12	15.10	33.58	6.02	308	10	15.17	33.58	6.02	24.86	310	0.03
32	12.32	33.64	4.20	250	20	13.90	33.60	5.35	25.15	283	0.06
52	11.14	33.72	3.28	223	30	12.37	33.64	4.26	25.48	251	0.09
77	10.43	33.78	2.94	207	50	11.23	33.71	3.36	25.75	225	0.14
100	10.12	33.93	2.38	190	75	10.52	33.77	2.97	25.93	208	0.19
125	10.14	34.13	1.70	176	100	10.12	33.93	2.38	26.12	190	0.24
164	9.64	34.22	1.43	162	150	9.57	34.14	1.54	26.38	166	0.33
203	9.73	34.33	1.15	155	200	9.75	34.33	1.17	26.49	155	0.41
252	9.43	34.36	0.97	148	250	9.44	34.36	0.97	26.56	148	0.49
296a)	8.86	34.36	0.82	139	300	8.80	34.36	0.80	26.67	138	0.56
392a)	7.78	34.36	0.66	123							

a) Pretrip suspected.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T,3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T,3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m
ORCA; April 8, 1959; 1315 GCT; 31°21'N, 117°27'W; sounding, 1100 fm; wind, 280°, force 3; weather, overcast; sea, moderate; wire angle, 09°.											100.40
0	17.15	33.66	5.50	347	0	17.15	33.66	5.50	24.48	347	0.00
10	17.14	33.67	5.31	346	10	17.14	33.67	5.31	24.48	346	0.03
30	16.44	33.62	5.39	334	20	17.14	33.67	5.31	24.48	346	0.07
40	16.30	33.64	5.40	330	30	16.44	33.62	5.39	24.61	334	0.10
49	15.64	33.57	5.44	321	50	15.40	33.55	5.42	24.79	317	0.17
64	13.60	33.51	4.84	283	75	13.48	33.54	4.77	25.19	279	0.24
79	12.42	33.55	4.44	259	100	10.99	33.58	4.01	25.70	230	0.31
99	11.04	33.58	4.03	232	150	9.42	33.82	3.09	26.15	188	0.41
124	9.92	33.62	3.92	210	200	8.51	33.97	2.31	26.42	162	0.50
144	9.48	33.77	3.19	192	250	8.09	34.12	1.85	26.59	146	0.58
173	8.86	33.90	2.85	173	300	7.76	34.19	1.43	26.70	136	0.66
203	8.48	33.98	2.30	161	400	7.00	34.28	0.72	26.88	118	0.79
233	8.20	34.08	2.00	150	500	6.28	34.34	0.44	27.02	105	0.90
274	7.92	34.16	1.61	140							
333	7.53	34.22	1.20	130							
408	6.92	34.29	0.66	117							
483	6.38	34.33	0.47	107							
563	5.89	34.38	0.37	97							
ORCA; April 8, 1959; 1935 GCT; 31°00'N, 118°07.5'W; sounding, 950 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 12°.											100.50
1	16.82	33.62	5.27	343	0	(16.82)	(33.62)	(5.27)	(24.52)	(343)	(0.00)
11	16.68	33.62	5.28	340	10	16.69	33.62	5.28	24.55	340	0.03
30	16.58	33.62	5.23	337	20	16.61	33.62	5.24	24.57	338	0.07
60	14.52	33.49	5.33	303	30	16.58	33.62	5.23	24.58	337	0.10
70	13.92	33.48	5.13	292	50	16.25	33.60	5.25	24.64	331	0.17
83	12.34	33.53	4.44	258	75	13.30	33.50	4.84	25.19	278	0.24
99	11.40	33.56	4.07	240	100	11.39	33.56	4.05	25.61	239	0.31
114	10.74	33.60	3.75	225	150	9.50	33.75	3.27	26.08	194	0.42
138	9.78	33.67	3.65	204	200	8.76	34.00	2.27	26.40	164	0.51
158	9.31	33.79	3.03	188	250	7.76	34.04	1.93	26.58	147	0.59
187	8.90	33.95	2.46	170	300	7.17	34.13	1.43	26.73	132	0.66
217	8.46	34.04	2.10	157	400	6.69	34.26	0.71	26.90	116	0.79
247	7.80	34.04	1.95	147	500	6.01	34.31	0.41	27.03	104	0.91
295	7.20	34.12	1.46	133	600	5.50	34.34	0.33	27.12	96	1.01
350	6.96	34.20	1.04	124							
434	6.46	34.29	0.52	111							
520	5.89	34.31	0.39	102							
605	5.47	34.34	0.32	95							
ORCA; April 9, 1959; 0202 GCT; 30°40.5'N, 118°47'W; sounding, 1515 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 10°.											100.60
1	16.62	33.67	5.34	335	0	(16.62)	(33.67)	(5.34)	(24.60)	(335)	(0.00)
11	16.62	33.68	5.32	334	10	16.62	33.68	5.32	24.61	334	0.03
31	16.42	33.65	5.33	332	20	16.55	33.67	5.33	24.62	333	0.07
60	16.04	33.63	5.35	325	30	16.43	33.65	5.33	24.64	332	0.10
71	13.93	33.53	5.30	288	50	16.11	33.63	5.35	24.70	326	0.16
85	12.49	33.47	4.33	266	75	13.46	33.51	5.00	25.17	281	0.24
100	11.10	33.58	3.92	233	100	11.10	33.58	3.92	25.67	233	0.31
115	10.18	33.66	3.63	211	150	9.34	33.77	3.21	26.12	190	0.41
140	9.46	33.75	3.33	194	200	8.60	33.95	2.54	26.38	165	0.50
160	9.22	33.80	3.10	186	250	8.03	34.09	1.91	26.58	147	0.58
189	8.78	33.91	2.69	171	300	7.42	34.08	1.61	26.66	139	0.66
219	8.30	34.02	2.25	156	400	7.05	34.30	0.65	26.88	118	0.79
249	8.04	34.09	1.92	147	500	6.22	34.33	0.38	27.02	105	0.91
298	7.42	34.08	1.62	140	600	5.59	34.35	0.28	27.12	96	1.01
354	7.35	34.25	0.94	126							
438	6.70	34.31	0.51	113							
523	6.02	34.33	0.33	103							
608	5.54	34.35	0.28	95							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

100.70 ORCA; April 9, 1959; 0824 GCT; 30°20.5'N, 119°27'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 10°.

1	16.21	33.53	5.41	336	0	(16.21)	(33.53)	(5.41)	(24.59)	(336)	(0.00)
11	16.20	33.56	5.46	334	10	16.20	33.56	5.46	24.62	334	0.03
30	15.86	33.49	5.48	331	20	16.20	33.56	5.46	24.62	334	0.07
60	15.36	33.48	5.43	321	30	15.86	33.49	5.48	24.64	331	0.10
70	15.32	33.49	5.54	319	50	15.50	33.48	5.44	24.72	324	0.16
85	13.74	33.39	5.43	295	75	15.30	33.49	5.54	24.77	318	0.25
100	12.40	33.49	4.90	262	100	12.40	33.49	4.90	25.36	262	0.32
114	11.56	33.51	4.65	246	150	9.65	33.62	4.09	25.95	206	0.44
139	10.10	33.61	4.24	214	200	8.92	33.93	2.88	26.32	172	0.53
159	9.54	33.69	3.91	199	250	8.15	34.05	2.01	26.54	151	0.62
189	8.96	33.86	3.17	178	300	7.77	34.14	1.57	26.66	139	0.69
219	8.55	33.98	2.43	163	400	6.91	34.25	0.75	26.86	120	0.83
248	8.18	34.05	2.02	152	500	6.13	34.32	0.38	27.03	104	0.94
298	7.78	34.14	1.58	140	600	5.56	34.38	0.28	27.14	94	1.05
353	7.28	34.22	1.04	127							
438	6.60	34.27	0.55	114							
523	5.96	34.34	0.34	101							
609	5.51	34.38	0.27	93							

100.80 ORCA; April 9, 1959; 1451 GCT; 30°00'N, 120°09'W; sounding, 1900 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 08°.

1	15.88	33.48	5.46	332	0	(15.88)	(33.48)	(5.46)	(24.62)	(332)	(0.00)
11	15.88	33.48	5.49	332	10	15.88	33.48	5.48	24.62	332	0.03
30	15.82	33.44	5.45	334	20	15.87	33.48	5.49	24.62	332	0.07
59	15.32	33.44	5.48	323	30	15.82	33.44	5.45	24.61	334	0.10
70	15.30	33.44	5.53	323	50	15.42	33.44	5.47	24.70	326	0.16
85	15.23	33.46	5.49	320	75	15.29	33.44	5.52	24.74	322	0.25
99	14.24	33.40	5.47	304	100	13.85	33.42	5.39	25.02	295	0.33
114	12.83	33.51	5.05	269	150	10.32	33.54	4.31	25.78	222	0.46
139	11.22	33.51	4.60	240	200	8.94	33.79	3.34	26.20	182	0.56
159	9.94	33.58	4.15	214	250	8.04	33.95	2.46	26.46	158	0.65
188	9.21	33.72	3.65	192	300	7.45	34.02	1.84	26.61	144	0.73
217	8.52	33.89	2.88	169	400	6.52	34.11	0.98	26.80	126	0.87
247	8.08	33.94	2.49	159	500	5.88	34.20	0.52	26.96	110	0.99
297	7.48	34.02	1.88	144	600	5.34	34.31	0.31	27.11	96	1.10
352	6.92	34.07	1.31	133							
437	6.24	34.13	0.76	121							
522	5.74	34.23	0.44	106							
608	5.30	34.31	0.30	96							

100.90 ORCA; April 9, 1959; 2041 GCT; 29°40'N, 120°48'W; sounding, 2050 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 06°.

1	16.58	33.58	5.37	340	0	(16.58)	(33.58)	(5.37)	(24.54)	(340)	(0.00)
11	16.48	33.58	5.37	338	10	16.49	33.58	5.37	24.56	338	0.03
32	16.24	33.57	5.45	334	20	16.45	33.58	5.38	24.57	337	0.07
61	16.04	33.58	5.44	328	30	16.27	33.57	5.45	24.61	334	0.10
71	16.01	33.56	5.47	329	50	16.11	33.58	5.45	24.65	330	0.17
87	15.46	33.51	5.48	321	75	16.00	33.56	5.47	24.66	329	0.25
102	14.66	33.48	5.28	306	100	14.67	33.46	5.29	24.88	308	0.33
117	13.80	33.65	4.99	277	150	10.80	33.57	4.41	25.72	228	0.47
142	11.30	33.56	4.55	238	200	8.99	33.80	3.30	26.21	182	0.57
162	10.21	33.60	4.20	216	250	8.40	33.94	2.55	26.41	163	0.66
192	9.12	33.77	3.47	186	300	7.56	34.05	1.94	26.62	143	0.74
222	8.72	33.87	2.93	173	400	6.69	34.18	1.02	26.84	122	0.88
252	8.36	33.95	2.49	162	500	6.19	34.27	0.50	26.98	109	1.00
301	7.54	34.05	1.93	143	600	5.62	34.32	0.33	27.09	98	1.11
357	6.96	34.13	1.33	129							
444	6.44	34.22	0.76	116							
528	6.03	34.29	0.42	106							
615	5.51	34.33	0.32	96							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
PAOLINA-T; April 8, 1959; 1103 GCT; 31°04.5'N, 116°26'W; sounding, 45 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.											103.30
1	15.56	33.63	6.11	314	0	(15.56)	(33.63)	(6.11)	(24.82)	(314)	(0.00)
12	14.78	33.57	5.91	302	10	15.28	33.60	6.05	24.86	310	0.03
32	11.79	33.64	3.62	240	20	12.57	33.63	4.18	25.44	255	0.06
52	10.82	33.60	3.72	226	30	11.93	33.64	3.68	25.57	242	0.08
73	10.36	33.77	3.09	206	50	10.92	33.60	3.72	25.72	228	0.13
					75	(10.32)	(33.79)	(3.04)	(25.97)	(204)	(0.18)
PAOLINA-T; April 8, 1959; 1417 GCT; 30°55'N, 116°45'W; sounding, 970 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.											103.35
2	17.14	33.57		353	0	(17.14)	(33.57)		(24.40)	(353)	(0.00)
12	17.14	33.60		351	10	17.14	33.59		24.42	352	0.04
33	16.66	33.58		342	20	17.00	33.60		24.46	348	0.07
43	16.00	33.60		326	30	16.68	33.58		24.52	342	0.10
53	14.40	33.55		296	50	14.98	33.57		24.89	307	0.17
68	12.80	33.55		265	75	12.29	33.57		25.44	255	0.24
83	11.74	33.59		243	100	11.04	33.62		25.71	229	0.30
103	10.95	33.62		227	150	9.82	33.78		26.05	197	0.41
127	10.50	33.79		207	200	8.81	34.00		26.39	165	0.50
147	9.92	33.78		198	250	8.25	34.18		26.61	144	0.58
176	9.08	33.89		178	300	7.60	34.15		26.69	136	0.65
205	8.76	34.03		162	400	7.26	34.28		26.84	122	0.79
234	8.47	34.18		147	500	6.48	34.31		26.98	109	0.91
274	7.89	34.15		140							
333	7.36	34.18		131							
408	7.24	34.29		121							
485	6.60	34.31		111							
566	6.00	34.31		104							
PAOLINA-T; April 8, 1959; 1756 GCT; 30°45'N, 117°05.5'W; sounding, 960 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 09°.											103.40
2	16.82	33.59		345	0	(16.82)	(33.59)		(24.49)	(345)	(0.00)
12	16.82	33.59		345	10	16.82	33.59		24.49	345	0.03
32	16.60	33.69		332	20	16.82	33.64		24.52	342	0.07
57	16.46	33.69		330	30	16.69	33.69		24.60	335	0.10
67	16.15	33.64		326	50	16.70	33.75		24.64	330	0.17
76	14.48	33.44		306	75	14.57	33.45		24.89	307	0.25
91	13.39	33.48		282	100	12.41	33.46		25.34	264	0.32
105	11.88	33.46		255	150	9.79	33.63		25.94	207	0.44
131	10.60	33.56		226	200	8.93	33.94		26.32	172	0.54
150	9.79	33.63		207	250	7.97	34.05		26.56	148	0.62
174	9.14	33.83		182	300	7.53	34.14		26.69	136	0.69
202	8.91	33.94		171	400	6.89	34.22		26.84	122	0.83
231	8.31	34.02		156	500	6.19	34.29		26.99	108	0.95
271	7.68	34.09		142							
331	7.44	34.18		132							
405	6.86	34.23		121							
479	6.34	34.28		110							
561	5.79a)	34.29		103							

a) Alternate value, 5.90°C, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
103.50	PAOLINA-T; April 9, 1959; 0039 GCT; 30°25'N, 117°41.5'W; sounding, 1550 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.										
1	16.58	33.58	5.23	340	0	(16.58)	(33.58)	(5.23)	(24.54)	(340)	(0.00)
11	16.60	33.52	5.36	345	10	16.60	33.52	5.36	24.49	345	0.03
31	15.94	33.48	5.43	333	20	16.00	33.48	5.42	24.61	334	0.07
61	15.74	33.48	5.42	329	30	15.95	33.48	5.43	24.62	333	0.10
71	15.48	33.50	5.32	323	50	15.83	33.48	5.43	24.64	331	0.17
86	13.98	33.37	5.31	301	75	15.19	33.48	5.31	24.78	318	0.25
100	13.30	33.57	5.11	273	100	13.30	33.57	5.11	25.25	273	0.32
115	12.12	33.56	4.88	252	150	10.06	33.58	4.23	25.85	216	0.45
139	10.50	33.55	4.46	225	200	8.77	33.82	3.20	26.26	177	0.55
160	9.68	33.61	3.98	207	250	8.20	33.96	2.54	26.45	158	0.63
188	8.92	33.78	3.26	183	300	7.56	34.06	1.80	26.62	143	0.71
218	8.55	33.87	3.12	170	400	6.91	34.15	1.13	26.79	127	0.85
247	8.24	33.96	2.61	160	500	6.26	34.22	0.51	26.94	113	0.98
297	7.59	34.05	1.82	144	600	5.60	34.28	0.32	27.06	101	1.09
351	7.12	34.09	1.57	134							
436	6.73	34.20	0.78	121							
522	6.10	34.23	0.46	111							
608	5.56	34.29	0.30	100							
103.60	PAOLINA-T; April 9, 1959; 0715 GCT; 30°07'N, 118°23'W; sounding, 2050 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 05°.										
1	16.60	33.62	5.36	338	0	(16.60)	(33.62)	(5.36)	(24.56)	(338)	(0.00)
11	16.62	33.62	5.57	338	10	16.62	33.62	5.57	24.56	338	0.03
31	15.92	33.48	5.43	333	20	16.62	33.62	5.57	24.56	338	0.07
61	15.68	33.48	5.61	328	30	15.93	33.48	5.43	24.62	333	0.10
72	15.68	33.46	5.62	330	50	15.82	33.48	5.48	24.64	331	0.17
88	14.31	33.45	5.40	301	75	15.68	33.46	5.62	24.66	330	0.25
103	13.85	33.55	5.35	285	100	14.05	33.54	5.37	25.07	290	0.33
117	12.24	33.53	5.06	257	150	10.25	33.60	4.35	25.84	217	0.46
140	10.58	33.56	4.45	225	200	9.14	33.83	2.96	26.20	182	0.56
160	9.98	33.66	4.22	208	250	8.42	34.03	2.20	26.47	157	0.64
189	9.36	33.80	3.08	188	300	7.83	34.12	1.72	26.64	142	0.72
218	8.78	33.89	2.80	172	400	7.19	34.25	0.83	26.82	124	0.86
246	8.48	34.02	2.25	159	500	6.22	34.26	0.48	26.96	110	0.98
295	7.87	34.11	1.76	143	600	5.60	34.33	0.38	27.10	97	1.09
349	7.54	34.22	1.25	130							
432	6.94	34.26	0.59	120							
516	6.05	34.27	0.46	108							
602	5.59	34.33	0.37	97							
103.70	PAOLINA-T; April 9, 1959; 1402 GCT; 29°46'N, 119°04'W; sounding, 2000 fm; wind, 290°, force 4; weather, overcast; sea, moderate; wire angle, 07°.										
1	16.94	33.70	5.42	339	0	(16.94)	(33.70)	(5.42)	(24.56)	(339)	(0.00)
11	16.96	33.70	5.43	340	10	16.96	33.70	5.43	24.55	340	0.03
31	16.86	33.69	5.44	339	20	16.97	33.70	5.43	24.55	340	0.07
56	16.00	33.55	5.54	330	30	16.88	33.69	5.44	24.56	339	0.10
66	16.05	33.58	5.44	328	50	16.00	33.55	5.54	24.66	330	0.17
76	16.06	33.61	5.40	326	75	16.06	33.61	5.40	24.69	326	0.25
90	15.54	33.55	5.54	320	100	13.69	33.46	5.35	25.08	289	0.33
105	13.68	33.47	5.34	288	150	10.63	33.66	4.44	25.82	219	0.46
129	12.22	33.63	4.41	249	200	9.03	33.85	3.64	26.23	180	0.56
149	10.68	33.66	4.45	220	250	8.18	33.96	2.76	26.45	158	0.65
174	9.72	33.70	4.09	201	300	7.58	34.05	1.96	26.61	144	0.72
203	8.93	33.86	3.57	177	400	6.77	34.18	1.02	26.83	123	0.86
233	8.40	33.93	3.11	164	500	6.13	34.24	0.51	26.96	110	0.98
273	7.89	34.00	2.30	152							
333	7.22	34.12	1.51	134							
409	6.71	34.19	0.95	121							
485	6.21	34.23	0.56	112							
567	5.82	34.31	0.39	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; April 9, 1959; 2005 GCT; 29°24.5'N, 119°44'W; sounding, 2000 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 01°. 103.80

1	17.46	33.93	5.29	334	0	(17.46)	(33.93)	(5.29)	(24.60)	(334)	(0.00)
11	17.42	33.87	5.34	338	10	17.43	33.87	5.34	24.57	338	0.03
31	17.40	33.91	5.30	334	20	17.42	33.87	5.34	24.57	338	0.07
57	17.36	33.93	5.26	332	30	17.40	33.91	5.30	24.60	334	0.10
67	17.50	33.96	5.13	333	50	17.27	33.91	5.29	24.64	331	0.17
77	17.62	34.00	5.00	333	75	17.76	34.00	5.01	24.59	336	0.25
93	16.71	33.97	5.32	314	100	15.85	33.86	5.11	24.93	304	0.33
108	14.40	33.64	4.77	290	150	11.38	33.58	4.24	25.63	237	0.47
133	12.48	33.52	4.15	262	200	9.35	33.73	3.46	26.09	193	0.58
152	11.23	33.59	4.23	234	250	8.67	33.98	2.60	26.40	164	0.67
176	10.10	33.59	3.98	215	300	8.31	34.11	1.64	26.56	149	0.75
207	9.19	33.78	3.32	187	400	7.21	34.22	0.83	26.80	126	0.90
236	8.76	33.93	2.91	169	500	6.44	34.26	0.52	26.94	112	1.02
275	8.54	34.07	1.94	156							
335	7.96	34.16	1.28	140							
410	7.10	34.23	0.78	124							
485	6.54	34.26	0.58	114							
566	5.94	34.29	0.27	104							

PAOLINA-T; April 10, 1959; 0217 GCT; 29°07'N, 120°22.5'W; sounding, 2100 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 04°. 103.90

1	17.62	33.95	5.15	336	0	(17.62)	(33.95)	(5.15)	(24.59)	(336)	(0.00)
11	17.64	33.96	5.30	336	10	17.64	33.96	5.30	24.59	336	0.03
31	17.58	33.94	5.29	336	20	17.64	33.96	5.30	24.59	336	0.07
57	17.28	33.90	5.45	333	30	17.59	33.94	5.29	24.59	336	0.10
67	17.56	34.02	5.38	330	50	17.10	33.86	5.34	24.64	331	0.17
77	17.61	34.18	5.33	320	75	17.61	34.17	5.33	24.75	321	0.25
92	17.47	34.19	5.39	316	100	16.40	34.00	5.43	24.92	305	0.33
107	15.33	33.82	5.45	295	150	11.22	33.58	4.80	25.66	234	0.46
132	12.82	33.60	5.09	262	200	9.13	33.74	3.37	26.13	189	0.57
151	11.10	33.58	4.78	233	250	8.27	33.96	2.62	26.44	160	0.66
176	9.62	33.62	3.84	206	300	7.64	34.04	2.23	26.60	145	0.74
206	9.01	33.77	3.26	185	400	6.63	34.15	1.05	26.82	124	0.88
236	8.48	33.93	2.69	165	500	5.79	34.22	0.60	26.98	108	1.00
276	7.91	34.00	2.53	152							
336	7.27	34.11	1.55	135							
413	6.51	34.16	0.98	121							
489	5.88	34.21	0.63	110							
570	5.35	34.27	0.42	99							

PAOLINA-T; April 11, 1959; 2237 GCT; 30°26'N, 116°09.5'W; sounding, 200 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 22°. 107.32

2	15.55	33.58		318	0	(15.55)	(33.58)		(24.78)	(318)	(0.00)
11	15.28	33.58		313	10	15.31	33.58		24.83	313	0.03
30	12.94	33.53		269	20	14.60	33.57		24.98	299	0.06
49	11.68	33.57		244	30	12.94	33.53		25.29	269	0.09
72	10.90	33.74		218	50	11.62	33.58		25.58	242	0.14
95	10.52	33.88		200	75	10.84	33.76		25.86	215	0.20
117	10.45	34.02		189	100	10.51	33.91		26.04	198	0.25
153	10.36	34.26		170	150	10.37	34.25		26.32	171	0.34
186a)	10.28	34.32		164	200	10.17	34.35		26.44	160	0.43
227a)	9.92	34.38		154	250	9.58	34.39		26.56	148	0.51
268a)	9.30	34.38		144	300	8.92	34.35		26.64	140	0.58
315a)	8.72	34.33		139							

a) Pretrip suspected.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
107.35	PAOLINA-T; April 11, 1959; 1950 GCT; 30°18'N, 116°20.5'W; sounding, 750 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 25°.										
2	17.12	33.58	5.45	352	0	(17.12)	(33.58)	(5.45)	(24.42)	(352)	(0.00)
11	17.06	33.60	5.77	350	10	17.07	33.60	5.76	24.44	350	0.04
30	16.68	33.59	5.30	342	20	17.02	33.60	5.73	24.46	348	0.07
39	15.92	33.58	5.35	326	30	16.68	33.59	5.30	24.52	342	0.10
52	13.88	33.57	4.69	285	50	14.16	33.57	4.78	25.07	290	0.17
66	12.69	33.58	4.09	261	75	12.01	33.62	3.82	25.53	246	0.23
88	11.04	33.67	3.54	225	100	10.40	33.68	3.73	25.87	214	0.29
105	10.17	33.68	3.76	210	150	8.97	33.86	3.00	26.25	178	0.39
120	9.73	33.73	3.53	199	200	8.68	34.05	2.26	26.45	159	0.48
137	9.34	33.81	3.24	187	250	9.02	34.30	1.10	26.58	146	0.56
160	8.79	33.89	2.85	173	300	8.13	34.27	0.99	26.70	135	0.63
188	8.70	34.00	2.43	164	400	7.06	34.26	0.70	26.85	121	0.76
213	8.62	34.11	2.04	154	500	6.20	34.26	0.63	26.96	110	0.88
256	9.03	34.32	1.03	145							
302	8.10	34.27	0.99	134							
376	7.33	34.27	0.80	124							
452	6.50	34.24	0.54	115							
534	6.02	34.27	0.73	107							
107.40	PAOLINA-T; April 11, 1959; 1613 GCT; 30°06.5'N, 116°39'W; sounding, 1400 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 18°.										
3	17.12	33.64	5.79	348	0	(17.12)	(33.64)	(5.79)	(24.46)	(348)	(0.00)
12	17.12	33.61	5.48	350	10	17.12	33.61	5.56	24.44	350	0.03
32	16.26	33.64	5.50	329	20	16.65	33.63	5.49	24.57	337	0.07
41	16.12	33.58	5.51a)	330	30	16.28	33.64	5.50	24.66	329	0.10
56	15.84	33.57	5.50	325	50	16.06	33.58	5.51	24.67	328	0.17
70	14.61	33.48	5.37	306	75	14.10	33.48	5.30	25.02	295	0.25
94	12.66	33.57	5.08	261	100	12.26	33.57	4.96	25.44	254	0.32
114	11.88	33.57	4.84	247	150	9.70	33.68	3.85	26.00	202	0.43
132	10.44	33.57	4.46	222	200	8.63	33.90	2.90	26.33	170	0.53
151	9.68	33.68	3.81	202	250	7.91	34.01	1.24	26.54	151	0.61
179	8.94	33.82	3.15	180	300	7.50	34.12	0.88	26.68	138	0.68
210	8.48	33.93	2.76	165	400	7.21	34.26	0.35	26.83	123	0.82
238	8.08	34.00	1.41	154	500	6.30	34.30	0.27	26.98	108	0.94
285	7.48	34.08	0.98	140	600	(5.54)	(34.31)		(27.08)	(98)	(1.05)
337	7.68	34.22	0.62	133							
417	7.04	34.27	0.30	120							
500	6.30	34.30	0.27	108							
583	5.64	34.31	0.13	100							
107.50	PAOLINA-T; April 11, 1959; 0932 GCT; 29°50'N, 117°23.5'W; sounding, 1575 fm; wind, 330°, force 5; weather, partly cloudy; sea, rough; wire angle, 16°.										
1	17.48	33.91		336	0	(17.48)	(33.91)		(24.59)	(336)	(0.00)
11	17.48	33.89		338	10	17.48	33.89		24.57	338	0.03
30	17.50	33.91		337	20	17.49	33.90		24.58	337	0.07
59	17.28	33.89		334	30	17.50	33.91		24.58	337	0.10
69	17.30	33.91		332	50	17.44	33.90		24.59	336	0.17
83	17.24	33.89		332	75	17.28	33.90		24.63	332	0.25
97	17.00	33.87		328	100	16.90	33.86		24.68	327	0.34
111	15.38	33.77		300	150	11.89	33.67		25.60	240	0.48
135	12.96	33.72		256	200	9.50	33.74		26.07	195	0.59
153	11.67	33.66		237	250	8.48	33.95		26.40	164	0.68
181	10.04	33.68		208	300	7.76	34.06		26.60	145	0.76
210	9.26	33.78		188	400	6.84	34.15		26.80	126	0.90
238	8.68	33.91		170	500	6.14	34.26		26.98	109	1.02
286	7.93	34.04		149	600	(5.63)	(34.33)		(27.09)	(98)	(1.13)
339	7.32	34.10		136							
421	6.68	34.17		123							
504	6.11	34.27		108							
588	5.68	34.33		99							

a) Alternate value, 5.66 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m	

PAOLINA-T; April 11, 1959; 0313 GCT; 29°32'N, 118°01'W; sounding, 1830 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 15°. 107.60

2	17.23	33.87	5.21	334	0	(17.23)	(33.87)	(5.21)	(24.61)	(334)	(0.00)	
12	17.26	33.87	5.56	334	10	17.25	33.87	5.50	24.61	334	0.03	
32	17.28	33.89	5.26	334	20	17.27	33.88	5.43	24.61	334	0.07	
61	17.14	33.90	5.11	329	30	17.28	33.89	5.28	24.62	334	0.10	
71	17.15	33.91	5.03	328	50	17.13	33.90	5.12	24.66	329	0.17	
85	17.17	33.94	5.10	326	75	17.16	33.92	5.04	24.67	328	0.25	
100	16.40	33.90	5.28	313	100	16.40	33.90	5.28	24.83	313	0.33	
114	14.84	33.86	5.15	283	150	11.50	33.76	3.40	25.74	226	0.47	
138	12.46	33.68	3.99	250	200	10.07	34.00	2.46	26.18	185	0.57	
156	11.16	33.82	3.11	216	250	9.24	34.22	1.79	26.48	156	0.66	
184	10.64	33.93	2.58	199								
212	9.74	34.04	2.38	176								
239	9.42	34.18	1.86	161								
284	8.50	34.25	1.59	142								

PAOLINA-T; April 10, 1959; 2020 GCT; 29°14'N, 118°42'W; sounding, 1950 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 08°. 107.70

1	17.59	33.93		337	0	(17.59)	(33.93)		(24.58)	(337)	(0.00)
11	17.58	33.93		337	10	17.58	33.93		24.58	337	0.03
31	17.56	33.93		337	20	17.57	33.93		24.58	337	0.07
62	17.32	33.92		332	30	17.56	33.93		24.58	337	0.10
72	17.32	33.90		333	50	17.34	33.92		24.63	332	0.17
87	17.22	33.93		329	75	17.31	33.90		24.62	333	0.25
102	15.97	33.81		310	100	16.15	33.82		24.83	313	0.33
117	14.71	33.71		291	150	11.80	33.70		25.64	236	0.47
142	12.42	33.72		246	200	9.81	33.84		26.09	193	0.58
162	11.02	33.68		224	250	9.11	34.14		26.45	159	0.67
191	9.95	33.76		200	300	8.68	34.30		26.64	141	0.75
220	9.54	34.00		176	400	7.79	34.35		26.82	124	0.89
249	9.12	34.14		159	500	6.88	34.36		26.95	111	1.01
298	8.70	34.29		142	600	6.05	34.38		27.07	100	1.12
352	8.09	34.32		131							
437	7.55	34.37		120							
522	6.65	34.36		108							
612	5.97a)	34.38		98							

PAOLINA-T; April 10, 1959; 1409 GCT; 28°51.5'N, 119°19'W; sounding, 2000 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 15°. 107.80

2	17.40	33.87	5.29	337	0	(17.40)	(33.87)	(5.29)	(24.58)	(337)	(0.00)
12	17.42	33.84	5.38	340	10	17.41	33.84	5.38	24.55	340	0.03
31	17.08	33.79	5.26	336	20	17.40	33.84	5.38	24.55	340	0.07
61	17.16	33.82	5.35	335	30	17.09	33.79	5.27	24.59	336	0.10
					50	17.12	33.81	5.30	24.60	335	0.17

a) Alternate value, 6.16°C, not used in interpolation.

SIO

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5904

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10 cm/g	ΔD dyn. m
107.90	PAOLINA-T; April 10, 1959; 0749 GCT; 28°32'N, 119°58.5'W; sounding, 2300 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 15°.										
1	17.28	33.76		343	0	(17.28)	(33.76)		(24.51)	(343)	(0.00)
11	17.30	33.69		348	10	17.30	33.69		24.46	348	0.03
30	17.22	33.73		344	20	17.30	33.71		24.47	347	0.07
59	16.89	33.69		339	30	17.22	33.73		24.50	344	0.10
69	16.88	33.68		340	50	16.90	33.69		24.56	339	0.17
83	16.26	33.62		330	75	16.78	33.66		24.56	339	0.26
98	15.48	33.70		307	100	15.06	33.67		24.96	301	0.34
112	13.82	33.63		279	150	11.12	33.68		25.76	225	0.47
135	12.60	33.66		254	200	9.92	33.99		26.20	183	0.58
154	10.74	33.69		218	250	9.42	34.26		26.48	156	0.66
183	9.69	33.82		192	300	8.71	34.26		26.61	144	0.74
211	10.00	34.08		178	400	7.64	34.28		26.78	128	0.88
240	9.58	34.23		160	500	6.72	34.34		26.95	111	1.01
287	8.86	34.26		146	600	(6.00)	(34.35)		(27.06)	(101)	(1.12)
341	8.24	34.27		137							
423	7.41	34.28		124							
507	6.66	34.34		110							
593	6.03	34.35		102							
110.33	PAOLINA-T; April 12, 1959; 0347 GCT; 29°49.5'N, 115°52'W; sounding, 52 fm; wind, 340°, force 5; weather, clear; sea, rough; wire angle, 07°.										
2	14.47	33.66	5.82u	290	0	(14.47)	(33.66)		(25.07)	(290)	(0.00)
13	14.47	33.59	4.72	294	10	14.47	33.60		25.03	294	0.03
33	11.78	33.62	4.12	242	20	13.30	33.60	4.47	25.27	271	0.06
53	10.82	33.73	3.29	217	30	12.06	33.62	4.19	25.52	247	0.08
78	10.45	33.94	2.87	195	50	10.89	33.70	3.43	25.80	221	0.13
					75	10.49	33.91	2.91	26.04	198	0.18
110.35	PAOLINA-T; April 12, 1959; 0550 GCT; 29°46'N, 116°00'W; sounding, 750 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 40°.										
3	16.42	33.58	5.90	337	0	(16.42)	(33.58)	(5.90)	(24.58)	(337)	(0.00)
10	16.39	33.58	5.76	336	10	16.39	33.58	5.76	24.59	336	0.03
25	15.70	33.57	6.14	322	20	16.05	33.58	5.94	24.66	329	0.07
33	15.16	33.54	6.02	312	30	15.39	33.55	6.10	24.79	316	0.10
45	13.12	33.55	4.71	271	50	12.64	33.57	4.37	25.38	261	0.16
56	12.16	33.58	4.08	251	75	11.08	33.59	4.10	25.68	232	0.22
73	11.29	33.59	4.08	235	100	10.52	33.81	3.46	25.96	206	0.27
86	10.38	33.58	4.13	221	150	10.12	34.05	2.47	26.21	182	0.37
97	10.49	33.78	3.53	208	200	9.77	34.30	1.36	26.46	158	0.46
107	10.56	33.87	3.21	202	250	9.53	34.40	0.91	26.58	146	0.54
122	10.30	33.98	2.38	190	300	8.76	34.39	0.90	26.70	135	0.61
141	10.17	34.03	2.55	184	400	(7.69)	(34.38)	(0.53)	(26.86)	(120)	(0.74)
159	10.07	34.07	2.26	180							
187	9.70	34.22	1.74	162							
218	9.88	34.38	1.06	154							
272	9.22	34.42	0.84	140							
331	8.30	34.38	0.94	129							
397	7.72	34.38	0.54	120							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T_3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; April 12, 1959; 0944 GCT; 29°37'N, 116°18.5'W; sounding, 1165 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 25°. 110.40

2	17.03	33.68	5.43	343	0	(17.03)	(33.68)	(5.43)	(24.51)	(343)	(0.00)
11	17.04	33.68	5.49	343	10	17.04	33.68	5.49	24.51	343	0.03
34	16.82	33.67	5.59	339	20	17.04	33.68	5.49	24.51	343	0.07
61	16.20	33.61	5.50	330	30	17.00	33.68	5.53	24.52	342	0.10
71	16.05	33.62	5.46	326	50	16.33	33.61	5.54	24.63	332	0.17
89	15.36	33.69	5.34	306	75	15.93	33.62	5.44	24.73	323	0.25
102	13.16	33.61	5.11	267	100	13.42	33.61	5.14	25.26	272	0.33
116	12.36	33.67	4.90	248	150	9.84	33.61	4.11	25.91	210	0.45
142	10.28	33.59	4.25	218	200	9.13	33.97	2.59	26.31	172	0.55
158	9.58	33.66	3.93	202	250	9.41	34.29	1.13	26.52	152	0.63
211	9.10	34.04	2.24	166	300	8.83	34.32	0.89	26.64	142	0.71
237	9.46	34.26	1.25	156	400	7.25	34.27	0.69	26.83	123	0.84
278	9.14	34.31	0.99	147	500	6.20	34.26	0.49	26.97	109	0.96
334	8.28	34.33	0.76	133							
422	6.90	34.25	0.68	120							
505	6.16	34.27	0.47	108							
576	5.92	34.34	0.32	101							

PAOLINA-T; April 12, 1959; 1635 GCT; 29°17'N, 117°05'W; sounding, 2050 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 10°. 110.50

3	17.26	33.83	5.52	336	0	(17.26)	(33.83)	(5.52)	(24.58)	(336)	(0.00)
13	17.26	33.80	5.66	339	10	17.26	33.81	5.65	24.56	339	0.03
33	17.27	33.83	5.59	338	20	17.26	33.81	5.66	24.56	339	0.07
63	16.86	33.75	5.52	334	30	17.27	33.83	5.62	24.57	338	0.10
73	16.74	33.76	5.50	330	50	17.27	33.83	5.59	24.57	338	0.17
88	16.28	33.75	5.44	321	75	16.72	33.76	5.49	24.65	330	0.25
102	14.81	33.68	5.47	295	100	14.94	33.68	5.47	25.00	298	0.33
118	14.10	33.69	5.16	280	150	11.43	33.66	3.87	25.67	233	0.47
141	11.90	33.63	4.09	243	200	9.96	33.90	2.98	26.13	190	0.58
161	10.96	33.71	3.63	221	250	8.38	33.99	2.67	26.45	159	0.66
190	10.20	33.89	3.10	194	300	7.87	34.08	1.93	26.60	145	0.74
220	9.42	33.93	2.76	180	400	7.15	34.18	1.24	26.78	128	0.89
249	8.39	33.99	2.68	159	500	6.49	34.29	0.59	26.95	112	1.01
298	7.88	34.08	1.95	146	600	5.91	34.35	0.37	27.08	100	1.12
352	7.51	34.14	1.38	136							
438	6.88	34.22	1.15	122							
524	6.36	34.32	0.46	108							
611	5.86	34.36	0.36	98							

PAOLINA-T; April 12, 1959; 2230 GCT; 28°56'N, 117°41'W; sounding, 2000+ fm; wind, 320°, force 6; weather, cloudy; sea, rough; wire angle, 18°. 110.60

2	17.26	33.74	5.16	344	0	(17.26)	(33.74)	(5.16)	(24.50)	(344)	(0.00)
12	17.25	33.73	5.15	344	10	17.25	33.73	5.15	24.50	344	0.03
31	17.16	33.72	5.11	342	20	17.22	33.73	5.14	24.50	344	0.07
60	16.81	33.69	5.15	337	30	17.16	33.72	5.11	24.51	343	0.10
69	16.77	33.71	5.18	335	50	17.12	33.71	5.11	24.52	342	0.17
84	16.06	33.77	5.20	315	75	16.30	33.72	5.20	24.72	323	0.25
98	-	33.58	5.12		100	14.20	33.58	5.07	25.07	290	0.33
112	12.75	33.57	4.45	263	150	10.79	33.68	3.47	25.80	220	0.46
136	11.32	33.63	3.69	232	200	9.79	33.94	2.57	26.18	184	0.56
155	10.67	33.69	3.40	218	250	8.78	34.03	2.23	26.42	162	0.65
184	10.36	33.96	2.42	192	300	8.20	34.09	1.79	26.55	150	0.73
213	9.23	33.91	2.69	178	400	7.68	34.28	0.72	26.78	128	0.88
242	8.87	34.01	2.34	165	500	6.68	34.31	0.35	26.94	112	1.00
345	7.75	34.14	1.39	139	600	5.94	34.33	0.37	27.06	101	1.12
428	7.64	34.35	0.45	122							
513	6.53	34.31	0.34	110							
600	5.94	34.33	0.37	101							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

110.70 PAOLINA-T; April 18, 1959; 0432 GCT; 28°36.5'N, 118°17'W; sounding, 1600 fm; wind, 320°, force 5; weather, cloudy; sea, moderate; wire angle, 10°.

2	17.33	33.79	5.27	342	0	(17.33)	(33.79)	(5.27)	(24.53)	(342)	(0.00)
12	17.34	33.73	5.22	346	10	17.34	33.74	5.23	24.49	345	0.03
32	17.35	33.75	5.22	345	20	17.34	33.74	5.22	24.48	346	0.07
63	17.18	33.78	5.23	339	30	17.35	33.75	5.22	24.49	345	0.10
72	16.79	33.73	5.18	334	50	17.35	33.76	5.22	24.50	344	0.17
88	16.10	33.81	4.73	313	75	16.65	33.73	5.12	24.64	331	0.26
103	14.82	33.72	4.34	293	100	15.20	33.75	4.41	24.99	298	0.34
118	13.97	33.77	4.55	271	150	11.25	33.70	3.42	25.74	226	0.47
142	11.55	33.69	3.51	232	200	10.16	33.99	2.35	26.16	186	0.57
162	10.92	33.74	3.30	218	250	8.95	34.14	1.79	26.47	157	0.66
191	10.35	33.93	2.54	194	300	8.52	34.20	1.47	26.59	146	0.74
220	9.66	34.09	1.99	172	400	7.26	34.23	0.83	26.80	126	0.88
250	8.95	34.14	1.79	157	500	6.67	34.33	0.38	26.96	110	1.01
299	8.52	34.20	1.48	146	600	6.03	34.36	0.27	27.06	101	1.12
355	7.56	34.20	1.22	132							
437	7.04	34.27	0.51	120							
525	6.50	34.35	0.34	107							
613	5.94	34.36	0.26	100							

110.80 PAOLINA-T; April 18, 1959; 1122 GCT; 28°17'N, 118°59'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 15°.

1	17.22	33.74	5.26	343	0	(17.22)	(33.74)	(5.26)	(24.51)	(343)	(0.00)
11	17.23	33.73	5.31	344	10	17.23	33.73	5.31	24.50	344	0.03
31	17.28	33.72	5.26	345	20	17.25	33.72	5.29	24.50	344	0.07
60	17.08	33.78	5.34	337	30	17.28	33.72	5.26	24.49	345	0.10
69	17.02	33.77	5.33	337	50	17.22	33.77	5.30	24.54	340	0.17
84	15.96	33.64	5.32	322	75	16.99	33.76	5.32	24.59	336	0.26
98	15.39	33.64	5.31	310	100	15.22	33.64	5.28	24.90	306	0.34
112	13.54	33.62	4.78	274	150	10.82	33.58	4.27	25.72	228	0.47
136	11.62	33.56	4.38	244	200	9.52	33.85	3.12	26.16	186	0.58
155	10.58	33.60	4.23	222	250	9.15	34.14	1.83	26.44	160	0.66
184	9.61	33.74	3.69	197	300	8.66	34.22	1.24	26.59	146	0.74
212	9.44	33.95	2.65	178	400	7.41	34.28	0.65	26.81	125	0.88
241	9.22	34.11	1.97	163	500	6.54	34.29	0.43	26.94	112	1.01
290	8.77	34.22	1.30	148	600	(6.18)	(34.31)	(0.39)	(27.01)	(106)	(1.12)
344	8.16	34.26	0.89	136							
427	7.61	34.28	0.55	120							
513	6.45	34.29	0.40	111							
598	6.19	34.31	0.39	106							

110.90 PAOLINA-T; April 18, 1959; 1805 GCT; 27°56.5'N, 119°39'W; sounding, 2000+ fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.

2	17.79	33.96	5.33	340	0	(17.79)	(33.96)	(5.33)	(24.55)	(340)	(0.00)
12	17.79	33.96	5.47	340	10	17.79	33.96	5.45	24.55	340	0.03
32	17.78	33.99	5.36	337	20	17.79	33.97	5.42	24.56	339	0.07
62	17.78	33.96	5.39	340	30	17.78	33.98	5.38	24.57	338	0.10
72	17.61	33.95	5.41	336	50	17.78	33.97	5.39	24.56	339	0.17
87	16.16	33.82	5.32	313	75	17.38	33.93	5.41	24.63	332	0.25
102	14.47	33.78	5.11	281	100	14.72	33.78	5.14	25.12	285	0.33
118	12.80	33.66	4.60	257	150	10.66	33.68	4.31	25.83	218	0.46
142	11.07	33.66	4.45	226	200	8.98	33.83	3.36	26.23	180	0.56
161	10.16	33.70	4.09	208	250	8.16	34.02	2.50	26.50	154	0.64
191	9.10	33.78	3.58	186	300	7.55	34.11	1.85	26.67	138	0.72
220	8.72	33.95	2.86	167	400	6.75	43.20	0.89	26.85	121	0.86
250	8.16	34.02	2.50	154	500	5.96	34.25	0.53	26.99	108	0.98
298	7.56	34.11	1.87	138	600	5.47	34.33	0.41	27.11	96	1.08
353	7.13	34.17	1.23	128							
438	6.42	34.22	0.68	116							
522	5.80	34.27	0.49	105							
608	5.44	34.33	0.40	96							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}	Z	T	S	O_2	σ_t	δT_{-5}	ΔD
m	°C	‰	ml/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

PAOLINA-T; April 20, 1959; 1401 GCT; 29°23'N, 115°17.5'W; sounding, 30 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 00°. 113.30

1	14.24	33.69	4.71	283	0	(14.24)	(33.69)	(4.71)	(25.15)	(283)	(0.00)
11	14.24	33.69	4.65	283	10	14.24	33.69	4.65	25.15	283	0.03
32	14.08	33.69	4.13	280	20	14.24	33.69	4.65	25.15	283	0.06
42	13.04	33.69	3.32	260	30	14.24	33.69	4.65	25.15	283	0.08

PAOLINA-T; April 20, 1959; 1031 GCT; 29°11'N, 115°41'W; sounding, 620 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 15°. 113.35

2	15.90	33.66	5.78	319	0	(15.90)	(33.66)	(5.78)	(24.77)	(319)	(0.00)
12	15.91	33.62	5.85	322	10	15.91	33.62	5.85	24.74	322	0.03
31	13.56	33.58	4.65	277	20	15.91	33.60	5.85	24.73	323	0.06
41	12.60	33.60	4.30	258	30	14.00	33.58	4.86	25.11	286	0.09
56	11.77	33.63	3.99	240	50	11.89	33.61	4.06	25.56	244	0.15
70	11.28	33.77	3.33	222	75	11.10	33.76	3.37	25.82	219	0.20
95	10.49	33.73	3.54	211	100	10.29	33.75	3.51	25.95	207	0.26
114	9.86	33.87	3.12	191	150	10.35	34.25	1.48	26.33	170	0.35
133	10.62	34.17	1.77	181	200	10.06	34.39	0.85	26.48	156	0.44
152	10.32	34.26	1.46	169	250	9.27	34.35	0.89	26.59	146	0.51
180	10.10	34.38	1.31	157	300	8.67	34.34	0.77	26.68	137	0.59
213	10.04	34.40	0.80	155	400	7.60	34.34	0.50	26.84	122	0.72
241	9.44	34.36	0.90	148	500	6.78	34.40	0.56	27.00	107	0.84
289	8.74	34.34	0.81	138	600	(6.03)	(34.36)		(27.07)	(100)	(0.95)
342	8.32	34.34	0.50	132							
424	7.37	34.35	0.50	118							
508	6.72	34.40	0.57	106							
594	6.08	34.37	0.26	100							

PAOLINA-T; April 20, 1959; 0701 GCT; 29°01.5'N, 115°59'W; sounding, 800 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 23°. 113.40

2	15.38	33.58		314	0	(15.38)	(33.58)		(24.82)	(314)	(0.00)
11	15.41	33.55		317	10	15.40	33.55		24.79	317	0.03
30	15.40	33.57		315	20	15.40	33.56		24.79	317	0.06
39	14.84	33.57		304	30	15.40	33.57		24.81	315	0.09
52	13.88	33.54		287	50	14.03	33.54		25.07	290	0.16
65	12.53	33.56		259	75	11.39	33.57		25.62	238	0.22
87	10.54	33.59		222	100	10.40	33.72		25.91	210	0.28
106	10.40	33.78		206	150	9.75	34.12		26.33	171	0.38
123	10.30	33.93		193	200	9.91	34.35		26.48	156	0.46
141	10.12	34.11		177	250	8.97	34.33		26.62	143	0.53
166	9.76	34.18		166	300	8.40	34.33		26.72	134	0.61
197	9.92	34.34		157	400	7.50	34.38		26.88	118	0.74
224	9.34	34.33		148	500	6.58	34.34		26.98	109	0.86
270	8.70	34.33		139							
320	8.20	34.34		130							
397	7.52	34.38		118							
478	6.78	34.34		111							
560	6.12	34.35		102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T,S}^{-5}$ 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T,S}^{-5}$ 10^3 cm/g	ΔD dyn. m

113.50 PAOLINA-T; April 20, 1959; 0035 GCT; 28°42'N, 116°37.5'W; sounding, 2000 fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 12°.

1	17.18	33.81	5.38	337	0	(17.18)	(33.81)	(5.38)	(24.58)	(337)	(0.00)
11	17.18	33.75	5.43	341	10	17.18	33.75	5.43	24.54	341	0.03
31	17.15	33.78	5.38	338	20	17.16	33.76	5.40	24.55	340	0.07
61	17.02	33.82	5.38	333	30	17.15	33.78	5.38	24.56	338	0.10
71	17.13	33.88	5.33	330	50	17.19	33.83	5.38	24.59	336	0.17
86	15.76	33.73	5.47	311	75	17.10	33.88	5.33	24.66	330	0.25
100	14.44	33.60	5.40	294	100	14.44	33.60	5.40	25.03	294	0.33
115	13.34	33.73	5.16	262	150	10.00	33.66	4.04	25.93	208	0.46
138	10.69	33.64	4.60	222	200	9.62	34.04	2.23	26.29	174	0.56
158	9.80	33.72	3.69	201	250	9.31	34.29	1.33	26.54	151	0.64
186	9.63	33.91	2.69	184	300	8.76	34.33	1.01	26.65	140	0.71
215	9.60	34.16	1.83	165	400	7.55	34.36	0.60	26.86	120	0.85
243	9.38	34.27	1.39	153	500	6.80	34.38	0.39	26.98	108	0.97
291	8.90	34.33	1.03	142	600	(5.88)	(34.38)	(0.28)	(27.10)	(97)	(1.08)
345	8.00	34.31	0.93	130							
428	7.34	34.39	0.45	115							
512	6.70	34.38	0.39	108							
597	5.91	34.38	0.28	98							

113.60 PAOLINA-T; April 19, 1959; 1914 GCT; 28°29'N, 117°12.4'W; sounding, 1900 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 10°.

2	17.17	33.77		340	0	(17.17)	(33.77)		(24.55)	(340)	(0.00)
12	17.16	33.75		340	10	17.16	33.76		24.55	340	0.03
32	17.15	33.73		342	20	17.15	33.74		24.54	341	0.07
63	16.42	33.66		331	30	17.15	33.73		24.53	342	0.10
72	15.92	33.62		322	50	17.00	33.71		24.55	340	0.17
87	14.91	33.74		293	75	15.75	33.63		24.78	318	0.25
102	13.88	33.64		280	100	14.10	33.66		25.15	282	0.33
116	12.58	33.58		259	150	10.90	33.72		25.82	219	0.46
140	11.22	33.66		229	200	10.03	34.09		26.25	178	0.56
159	10.62	33.78		210	250	9.78	34.33		26.48	156	0.64
188	9.70	33.87		188	300	9.20	34.36		26.60	144	0.72
217	10.70	34.40		166	400	7.87	34.34		26.80	126	0.86
246	9.83	34.33		156	500	6.72	34.33		26.96	111	0.98
295	9.26	34.36		146	600	5.98	34.37		27.08	99	1.10
348	8.40	34.33		134							
432	7.56	34.34		122							
519	6.51	34.33		108							
604	5.96	34.37		99							

113.70 PAOLINA-T; April 19, 1959; 1255 GCT; 28°06.5'N, 117°52'W; sounding, 1800 fm; wind, 320°, force 3; weather, drizzle; sea, moderate; wire angle, 08°.

1	18.23	34.06	5.24	343	0	(18.23)	(34.06)	(5.24)	(24.52)	(343)	(0.00)
11	18.26	34.02	5.32	346	10	18.25	34.02	5.31	24.48	346	0.03
31	18.26	34.01	5.38	347	20	18.26	34.01	5.37	24.47	347	0.07
61	18.27	34.04	5.30	345	30	18.26	34.01	5.38	24.47	347	0.10
71	18.03	34.02	5.30	341	50	18.26	34.02	5.34	24.48	346	0.17
86	16.48a)	33.84	5.32	319	75	17.95	34.01	5.30	24.55	340	0.26
101	14.60	33.68	4.93	291	100	14.66	33.68	4.96	25.05	292	0.34
116	13.88	33.69	4.63	276	150	11.39	33.66	4.26	25.68	232	0.47
141	11.92	33.65	4.40	242	200	9.34	33.80	3.42	26.14	188	0.58
161	10.80	33.67	4.05	221	250	8.53	34.01	2.53	26.44	160	0.67
190	9.64	33.75	3.63	196	300	7.87	34.08	2.03	26.60	145	0.75
219	8.88	33.92	2.97	172	400	7.06	34.23	0.93	26.82	124	0.89
248	8.57	34.01	2.56	160	500	6.25	34.26	0.53	26.96	111	1.01
297	7.90	34.08	2.08	146	600	5.76	34.31	0.39	27.06	101	1.12
350	7.40	34.21	1.31	129							
434	6.80	34.23	0.72	120							
519	6.11	34.27	0.49	108							
608	5.72	34.31	0.38	100							

a) Alternate value, 15.93°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

PAOLINA-T; April 19, 1959; 0624 GCT; 27°45'N, 118°32.5'W; sounding, 2000+ fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 07°. 113.80

2	18.12	34.08		338	0	(18.12)	(34.08)		(24.56)	(338)	(0.00)
13	18.14	34.04		342	10	18.13	34.05		24.53	342	0.03
32	18.13	34.05		342	20	18.14	34.04		24.52	342	0.07
62	18.08	34.04		341	30	18.13	34.05		24.53	342	0.10
72	18.08	34.02		342	50	18.10	34.04		24.54	341	0.17
87	18.06	34.02		341	75	18.08	34.02		24.52	342	0.26
101	17.60	33.96		336	100	17.61	33.96		24.59	336	0.34
117	15.32	33.77		299	150	11.49	33.68		25.68	232	0.48
141	12.04	33.63		246	200	9.81	33.95		26.18	184	0.59
161	11.00	33.77		217	250	8.73	34.04		26.44	160	0.68
190	10.22	33.94		192	300	8.04	34.14		26.62	143	0.76
219	9.04	33.96		172	400	7.36	34.23		26.79	127	0.90
249	8.74	34.04		161	500	6.47	34.25		26.92	114	1.02
299	8.04	34.14		143	600	5.80	34.27		27.03	104	1.14
353	7.72	34.20		134							
438	7.02	34.25		122							
523	6.28	34.25		112							
611	5.74	34.28		103							

PAOLINA-T; April 19, 1959; 0003 GCT; 27°22'N, 119°12'W; sounding, 2000+ fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 07°. 113.90

1	18.28	34.09	5.05	342	0	(18.28)	(34.09)	(5.05)	(24.52)	(342)	(0.00)
12	18.29	34.02	5.16	347	10	18.29	34.02	5.16	24.47	347	0.03
32	18.24	34.04	5.29	345	20	18.28	34.03	5.22	24.48	346	0.07
62	18.19	34.04	5.25	344	30	18.25	34.04	5.28	24.49	345	0.10
72	18.21	34.06	5.15	342	50	18.20	34.04	5.27	24.51	344	0.17
87	17.24	33.89	5.11	333	75	18.20	34.06	5.14	24.52	342	0.26
102	16.60	33.86	4.96	320	100	16.68	33.86	4.99	24.74	322	0.34
117	15.00	33.78	4.04	292	150	11.89	33.69	3.93	25.62	238	0.48
142	12.54	33.73	3.91	247	200	9.50	33.91	2.71	26.21	182	0.59
163	10.94	33.64	3.96	225	250	8.68	34.06	2.32	26.45	159	0.68
192	9.69	33.86	2.88	189	300	7.86	34.16	1.90	26.66	140	0.76
222	9.03	34.01	2.43	168	400	6.66	34.12	1.05	26.80	126	0.89
253	8.64	34.06	2.30	158	500	5.88	34.23	0.65	26.98	108	1.02
302	7.82	34.16	1.87	139	600	5.64	34.33	0.37	27.09	98	1.13
358	7.08	34.11	1.32	133							
443	6.26	34.15	0.87	119							
529	5.76	34.27	0.54	104							
615	5.62	34.34	0.35	97							

PAOLINA-T; April 20, 1959; 1908 GCT; 28°56'N, 114°41'W; sounding, 40 fm; wind, 280°, force 4; weather, clear; sea, moderate; wire angle, 05°. 117.26

2	16.34	33.74	5.65	322	0	(16.34)	(33.74)	(5.65)	(24.74)	(322)	(0.00)
12	16.16	33.73	5.70	320	10	16.20	33.73	5.69	24.75	321	0.03
33	13.54	33.60	4.56	275	20	15.80	33.71	5.63	24.82	314	0.06
53	12.72	33.70	3.24	253	30	14.10	33.62	4.88	25.12	285	0.09
					50	12.83	33.68	3.49	25.42	256	0.15

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
117.30	PAOLINA-T; April 20, 1959; 2138 GCT; 28°50'N, 114°53'W; sounding, 51 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 10°.										
1	16.79	33.73	5.60	334	0	(16.79)	(33.73)	(5.60)	(24.61)	(334)	(0.00)
11	16.72	33.74	5.64	332	10	16.73	33.74	5.64	24.63	332	0.03
31	14.92	33.65	5.04	299	20	16.53	33.74	5.61	24.67	328	0.07
51	12.28	33.69	3.14	246	30	15.10	33.65	5.13	24.93	303	0.10
76	11.36	33.82	2.45	220	50	12.32	33.69	3.15	25.53	246	0.15
91	11.18	33.95	1.56	206	75	11.39	33.81	2.51	25.80	220	0.21
117.35	PAOLINA-T; April 21, 1959; 0027 GCT; 28°38'N, 115°16'W; sounding, 140 fm;[a] wind, 260°, force 4; weather, overcast; sea, rough; wire angle, 05°.										
2	16.80	33.61	5.66	343	0	(16.80)	(33.61)	(5.66)	(24.52)	(343)	(0.00)
12	16.80	33.62	5.72	342	10	16.80	33.62	5.72	24.52	342	0.03
32	15.78	33.58	5.74	323	20	16.78	33.62	5.72	24.53	342	0.07
52	13.88	33.56	5.29	286	30	16.10	33.59	5.73	24.67	328	0.10
78	12.10	33.68	4.20	243	50	13.88	33.56	5.30	25.11	286	0.16
103	10.52	33.76	3.84	209	75	12.30	33.67	4.32	25.52	247	0.23
128	10.04b)	34.04	2.86	182	100	10.70	33.75	3.88	25.88	213	0.29
157	10.36	34.27	1.41	169	150	10.25	34.22	1.72	26.32	171	0.38
117.40	PAOLINA-T; April 21, 1959; 0454 GCT; 28°28'N, 115°35.5'W; sounding, 500+ fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 15°.										
3	16.16	33.58	5.74	331	0	(16.16)	(33.58)	(5.74)	(24.64)	(331)	(0.00)
13	16.16	33.58	5.79	331	10	16.16	33.58	5.79	24.64	331	0.03
32	15.84	33.58	5.70	324	20	16.10	33.58	5.79	24.65	330	0.07
62	13.68	33.53	5.22	284	30	15.90	33.58	5.72	24.70	325	0.10
72	13.08	33.55	4.94	271	50	15.00	33.56	5.50	24.88	308	0.16
86	11.46	33.57	4.56	240	75	12.78	33.56	4.85	25.34	264	0.23
100	10.36	33.75	3.63	208	100	10.36	33.75	3.63	25.94	208	0.29
116	9.96	33.80	3.46	197	150	10.08	34.00	2.70	26.18	185	0.39
138	9.81	33.84	3.57	192	200	10.18	34.33	1.23	26.42	162	0.48
157	10.26	34.11	2.06	180	250	9.90	34.43	0.70	26.55	150	0.56
186	10.24	34.30	1.30	165	300	9.40	34.46	0.58	26.65	140	0.64
214	10.11	34.36	1.13	158	400	7.87	34.36	0.51	26.82	124	0.77
243	9.96	34.42	0.74	151	500	6.83	34.36	0.35	26.96	111	0.90
292	9.54	34.46	0.58	142	600	(6.03)	(34.40)	(0.34)	(27.09)	(98)	(1.00)
345	8.51	34.38	0.60	132							
428	7.56	34.36	-	120							
514	6.70	34.36	0.35	109							
599	6.04	34.40	0.34	98							
117.50	PAOLINA-T; April 22, 1959; 0203 GCT; 28°07'N, 116°15'W; sounding, 2450 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 10°.										
2	16.96	33.70	5.73	340	0	(16.96)	(33.70)	(5.73)	(24.55)	(340)	(0.00)
12	16.92	33.71	5.72	338	10	16.93	33.71	5.72	24.56	338	0.03
32	16.78	33.71	5.68	335	20	16.86	33.71	5.70	24.58	337	0.07
61	14.00	33.59	5.08	285	30	16.78	33.71	5.68	24.60	335	0.10
71	12.73	33.60	4.28	260	50	16.00	33.69	5.48	24.77	319	0.17
85	11.63	33.57	4.69	243	75	12.40	33.59	4.37	25.44	255	0.24
100	10.81	33.63	3.93	224	100	10.81	33.63	3.93	25.76	224	0.30
115	10.62	33.81	2.98	208	150	9.61	33.91	2.89	26.19	184	0.40
140	10.01	33.91	2.88	190	200	8.92	34.04	2.46	26.40	164	0.49
159	9.36	33.93	2.91	178	250	8.24	34.14	2.00	26.58	147	0.57
188	9.08	34.02	2.50	168	300	7.74	34.16	1.42	26.68	137	0.64
217	8.69	34.07	2.43	158	400	7.53	34.39	0.59	26.88	118	0.78
246	8.30	34.13	2.06	148	500	6.77	34.40	0.42	27.00	107	0.89
295	7.74	34.15	1.46	138	600	6.06	34.42	0.42	27.10	97	1.00
349	7.76	34.31	0.74	127							
433	7.34	34.42	0.52	112							
518	6.60	34.39	0.39	106							
605	6.02	34.42	0.42	96							

a) Sounding varied from 140 to 100 fathoms.

b) Alternate value, 9.78°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; April 22, 1959; 0852 GCT; 27°44.5'N, 116°56.5'W; sounding, 2100 fm; wind, 330°, force 4; weather, overcast; sea, moderate; wire angle, 10°. 117.60

2	17.42	33.80	5.34	343	0	(17.42)	(33.80)	(5.34)	(24.51)	(343)	(0.00)
12	17.42	33.79	5.34	344	10	17.42	33.79	5.34	24.50	344	0.03
32	17.42	33.79	5.42	344	20	17.42	33.79	5.42	24.50	344	0.07
62	17.38	33.77	5.34	344	30	17.42	33.79	5.42	24.50	344	0.10
72	16.86	33.73	5.40	336	50	17.41	33.78	5.34	24.50	344	0.17
87	15.50	33.66	5.17	311	75	16.50	33.71	5.33	24.67	328	0.26
102	13.47	33.55	4.73	278	100	13.75	33.56	4.80	25.15	282	0.33
117	12.71	33.57	4.45	262	150	10.44	33.76	3.21	25.94	208	0.46
141	10.73	33.69	3.52	218	200	9.72	34.03	2.20	26.27	176	0.56
160	10.22	33.86	2.87	198	250	9.55	34.25	2.14	26.46	158	0.64
189	9.84	34.02	2.25	180	300	8.47	34.24	1.03	26.63	142	0.72
218	9.52	34.05	2.14	172	400	7.76	34.35	0.48	26.82	124	0.86
247	9.58	34.24	2.16	159	500	6.68	34.35	0.34	26.98	109	0.98
295	8.52	34.24	1.06	143	600	5.81	34.36	0.30	27.09	98	1.09
348	8.17	34.31	0.72	132							
433	7.46	34.38	0.35	118							
517	6.48	34.34	0.34	108							
602	5.80	34.36	0.30	98							

PAOLINA-T; April 22, 1959; 1533 GCT; 27°22'N, 117°38'W; sounding, 2050 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 04°. 117.70

2	18.08	34.08	5.12	338	0	(18.08)	(34.08)	(5.12)	(24.57)	(338)	(0.00)
12	18.10	34.09	4.27u	338	10	18.10	34.09	(5.19)	24.57	338	0.03
32	18.10	34.10	5.34	337	20	18.10	34.09	(5.27)	24.57	338	0.07
63	18.10	34.08	4.69u	339	30	18.10	34.10	(5.33)	24.58	337	0.10
73	18.11	34.08	5.30	339	50	18.10	34.09	5.33	24.57	338	0.17
88	17.30	33.95	5.33	329	75	18.10	34.08	5.30	24.56	339	0.25
102	16.35	33.87	4.90	314	100	16.63	33.91	5.03	24.78	318	0.34
117	14.54	33.77	4.99	283	150	11.78	33.70	3.94	25.65	235	0.48
142	12.32	33.68	4.19	247	200	9.98	33.96	2.69	26.17	186	0.58
162	11.02	33.75	3.59	219	250	8.99	34.13	1.96	26.46	158	0.67
190	10.09	33.90	2.94	192	300	9.03	34.34	1.07	26.62	143	0.75
220	9.75	34.07	2.26	174	400	7.77	34.33	0.71	26.81	125	0.89
250	8.99	34.13	1.96	158	500	6.82	34.34	0.48	26.95	112	1.01
298	9.06	34.34	1.08	144	600	6.10	34.38	0.39	27.07	100	1.12
351	8.48	34.36	0.82	134							
436	7.28	34.32	0.62	120							
521	6.68	34.35	0.44	109							
607	6.04	34.39	0.39	99							

PAOLINA-T; April 22, 1959; 1709 GCT;[a] 27°22'N, 117°38'W; sounding, 2050 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 04°. 117.70

1	18.14	34.13	5.35	336	0	(18.14)	(34.13)	(5.35)	(24.59)	(336)	(0.00)
11	18.12	34.10	5.37	337	10	18.12	34.10	5.37	24.58	337	(0.03)
51	18.12	34.09	5.34	338	20	(18.12)	(34.09)	(5.34)	(24.57)	(338)	(0.07)
56	18.12	34.09	5.40	338	30	(18.12)	(34.09)	(5.34)	(24.57)	(338)	(0.10)
61	18.13	34.08	5.48	339	50	(18.12)	(34.09)	(5.34)	(24.57)	(338)	(0.17)
66	18.12	34.08	5.30	339	75	18.12	34.07	5.33	24.55	340	(0.25)
71	18.13	34.05	5.35	341	100	15.30	33.77	5.10	24.98	298	(0.34)
76	18.11	34.07	5.33	340	150	11.32	33.71	3.57	25.74	226	(0.47)
80	17.78	33.98	5.40	338	200	10.06	33.93	2.71	26.12	190	(0.57)
86	17.01	33.86	5.19	330							
90	16.65	33.81	5.17	325							
95	16.07	33.80	5.16	313							
100	15.30	33.77	5.10	298							
104	14.61	33.76	4.90	286							
109	14.22	33.73	4.87	280							
114	13.93	33.73	4.75	274							
149	11.34	33.71	3.59	227							
200	10.06	33.93	2.71	190							

a) Test cast.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
117.80	PAOLINA-T; April 22, 1959; 2153 GCT; 27°04.5'N, 118°08.5'W; sounding, 2000+ fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 10°.										
2	18.31	34.05	5.29	345	0	(18.31)	(34.05)	(5.29)	(24.49)	(345)	(0.00)
12	18.13	33.98	5.37	346	10	18.17	34.00	5.35	24.48	346	0.03
32	18.04	33.97	5.31	345	20	18.06	33.97	5.35	24.48	346	0.07
62	18.02	33.96	5.34	346	30	18.05	33.97	5.31	24.49	345	0.10
72	18.00	33.96	5.36	345	50	18.03	33.96	5.32	24.48	346	0.17
86	16.95	33.89	5.24	326	75	17.95	33.96	5.35	24.51	344	0.26
101	16.16	33.84	5.08	312	100	16.18	33.84	5.08	24.84	312	0.34
115	15.40	33.77	4.70	301	150	11.98	33.81	3.22	25.69	231	0.48
139	12.62	33.77	3.64	246	200	9.99	33.94	2.63	26.15	188	0.59
159	11.44	33.84	2.89	220	250	9.07	34.09	2.12	26.42	162	0.68
188	10.53	33.91	2.68	198	300	8.93	34.24	1.33	26.56	149	0.76
216	9.40	34.00	2.56	174	400	7.72	34.30	0.73	26.79	127	0.90
246	9.08	34.08	2.19	164	500	6.78	34.32	0.41	26.94	113	1.03
295	8.97	34.23	1.39	150	600	6.03	34.36	0.24	27.07	101	1.14
349	8.30	34.28	0.97	136							
434	7.34	34.31	0.58	121							
517	6.64	34.32	0.38	111							
604	6.00	34.36	0.24	100							
117.90	PAOLINA-T; April 23, 1959; 0450 GCT; 26°47'N, 118°50'W; sounding, 2000+ fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 05°.										
2	18.18	33.99	5.36	346	0	(18.18)	(33.99)	(5.36)	(24.48)	(346)	(0.00)
12	18.18	33.98	5.36	347	10	18.18	33.98	5.36	24.47	347	0.03
32	18.17	34.01	5.30	345	20	18.18	33.99	5.35	24.48	346	0.07
58	18.16	33.98	5.33	346	30	18.17	34.01	5.30	24.49	345	0.10
68	18.18	34.00	5.23	346	50	18.16	33.99	5.33	24.48	346	0.17
78	18.12	34.02	5.21	344	75	18.15	34.02	5.22	24.50	344	0.26
93	17.07	33.96	5.17	324	100	16.19	33.87	4.97	24.86	310	0.34
107	15.12	33.76	4.70	296	150	11.90	33.76	3.54	25.66	234	0.48
132	12.86	33.70	3.95	255	200	10.00	34.04	2.26	26.23	180	0.58
152	11.80	33.77	3.48	231	250	9.27	34.22	1.70	26.48	156	0.67
176	10.51	33.89	2.89	200	300	8.58	34.23	1.38	26.61	144	0.75
206	9.90	34.08	2.15	176	400	7.59	34.33	0.73	26.83	123	0.89
235	9.44	34.20	1.82	160	500	6.50	34.35	0.37	27.00	107	1.01
275	8.96	34.22	1.53	151							
334	8.04	34.25	1.20	135							
408	7.52	34.33	0.67	122							
482	6.66	34.34	0.41	110							
563	6.11	34.35	0.25	101							
118.39	PAOLINA-T; April 21, 1959; 0805 GCT; 28°18.5'N, 115°24'W; sounding, 160 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 12°.										
2	16.60	33.64	5.70	336	0	(16.60)	(33.64)	(5.70)	(24.59)	(336)	(0.00)
12	16.60	33.64	5.63	336	10	16.60	33.64	5.63	24.59	336	0.03
32	15.98	33.60	5.77	326	20	16.60	33.64	5.63	24.59	336	0.07
51	13.20	33.58	5.07	270	30	16.00	33.60	5.77	24.70	326	0.10
75	10.80	33.69	4.03	220	50	13.60	33.58	5.20	25.20	278	0.16
99	11.38	34.03	2.17	204	75	10.80	33.69	4.03	25.81	220	0.22
122	10.78	34.14	1.67	186	100	11.40	34.04	2.15	25.98	204	0.28
158	10.60	34.27	1.21	173	150	10.63	34.24	1.30	26.27	176	0.37
196	10.20	34.38	0.84	158	200	10.16	34.38	0.84	26.46	157	0.46
244	9.64	34.39	0.76	149	250	(9.59)	(34.39)	(0.76)	(26.56)	(148)	(0.53)
119.33	STRANGER; April 18, 1959; 1944 GCT; 28°19'N, 114°56'W; sounding, 60 fm; wind, 350°, force 2; weather, overcast; sea, moderate; wire angle, 08°.										
2	17.58	33.81	5.29	346	0	(17.58)	(33.81)	(5.29)	(24.48)	(346)	(0.00)
12	17.53	33.79	5.60	346	10	17.54	33.79	5.55	24.48	346	0.03
32	17.40	33.78	5.56	344	20	17.49	33.79	5.59	24.49	345	0.07
52	16.69	33.75	5.63	330	30	17.41	33.78	5.57	24.50	344	0.10
77	11.94	-	2.51		50	17.00	33.76	5.62	24.59	336	0.17
					75	12.00		2.75			

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

STRANGER; April 19, 1959; 0030 GCT; 28°23'N, 114°14.5'W; sounding, 32 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 00°. 120.25

2	16.98	33.75	5.74	336	0	(16.98)	(33.75)	(5.74)	(24.59)	(336)	(0.00)
12	16.96	33.77	5.70	334	10	16.97	33.77	5.71	24.60	335	0.03
32	16.45	33.72	5.76	327	20	16.71	33.75	5.73	24.64	331	0.07
42	14.04	33.66	4.52	281	30	16.52	33.72	5.76	24.68	328	0.10

STRANGER; April 18, 1959; 2202 GCT; 28°13'N, 114°34'W; sounding, 49 fm; wind, 350°, force 3; weather, cloudy; sea, moderate; wire angle, 02°. 120.30

2	16.84	33.73	5.21	336	0	(16.84)	(33.73)	(5.21)	(24.59)	(336)	(0.00)
12	16.72	33.71	5.56	334	10	16.76	33.72	5.53	24.61	334	0.03
32	16.08	33.66	5.65	323	20	16.30	33.67	5.64	24.68	327	0.07
52	12.53	33.63	3.93	254	30	16.10	33.67	5.65	24.73	323	0.10
77	11.32	33.84	2.59	217	50	13.30	33.63	4.45	25.30	268	0.16
					75	11.57	33.78	2.92	25.74	226	0.22

STRANGER; April 18, 1959; 1736 GCT; 28°03'N, 114°53.5'W; sounding, 41 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 04°. 120.35

2	17.72	33.86	5.67	345	0	(17.72)	(33.86)	(5.67)	(24.49)	(345)	(0.00)
12	17.70	33.85	5.41	345	10	17.70	33.85	5.45	24.49	345	0.03
32	17.69	33.85	5.29	345	20	17.70	33.85	5.37	24.49	345	0.07
52	17.62	33.83	5.36	345	30	17.69	33.85	5.30	24.49	345	0.10
					50	17.63	33.83	5.35	24.49	345	0.17

PAOLINA-T; April 24, 1959; 1904 GCT; 27°44'N, 115°29'W; sounding, 1100 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 17°. 120.45

2	17.22	33.66	5.19	349	0	(17.22)	(33.66)	(5.19)	(24.45)	(349)	(0.00)
12	16.95	33.60	5.10	347	10	16.99	33.60	5.11	24.47	347	0.04
31	16.22	33.58	5.27	332	20	16.62	33.59	5.18	24.54	340	0.07
41	15.68	33.57	5.12	322	30	16.26	33.58	5.27	24.62	333	0.10
51	14.75	33.62	4.70	298	50	14.86	33.61	4.75	24.96	301	0.17
65	13.32	33.79	3.24	257	75	12.22	33.78	3.08	25.62	238	0.23
79	11.76	33.78	3.03	229	100	10.59	33.84	2.85	25.97	204	0.29
98	10.58	33.81	2.92	207	150	10.89	34.31	1.01	26.28	175	0.38
122	10.95	34.19	1.52	185	200	10.27	34.41	0.77	26.47	157	0.47
140	10.96	34.28	1.13	178	250	9.99	34.48	0.48	26.58	147	0.55
168	10.73	34.37	0.87	168	300	9.58	34.46	0.42	26.63	142	0.62
196	10.30	34.40	0.79	158	400	8.57	34.41	0.37	26.75	130	0.76
225	10.18	34.46	0.60	152	500	7.43	34.38	0.30	26.89	117	0.89
262	9.89	34.49	0.45	145							
319	9.41	34.45	0.41	141							
391	8.66	34.42	0.37	132							
464	7.94	34.38	0.34	124							
544	6.74	34.38	0.26	108							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

120.50 PAOLINA-T; April 24, 1959; 1422, 1600, 1624 GCT; 27°34'N, 115°49'W; sounding, 2150 fm; wind, 300°, force 3; weather, cloudy; sea, slight; wire angle, 04, 02, 00°.

2	17.50	33.76	5.34	348	0	(17.50)	(33.76)	(5.34)	(24.46)	(348)	(0.00)
12	17.50	33.77	5.33	347	10	17.50	33.77	5.33	24.47	347	0.03
33	17.46	33.79	5.34	344	20	17.50	33.78	5.33	24.48	346	0.07
58	15.80	33.59	5.48	322	30	17.48	33.79	5.34	24.49	345	0.10
68	15.15	33.60	5.29	308	50	17.02	33.77	5.40	24.59	336	0.17
78	13.16	33.60	4.77	268	75	13.30	33.58	4.84	25.25	273	0.25
93	12.22	33.68	4.08	245	100	11.90	33.70	3.92	25.62	238	0.31
108	11.54	33.73	3.74	229	150	10.00	33.82	3.21	26.06	196	0.42
133	10.84	33.83	3.22	210	200	8.70	34.03	2.63	26.43	161	0.51
153	9.84	33.82	3.21	194	250	8.51	34.21	1.60	26.60	145	0.59
177	9.18	33.93	2.99	175	300	8.41	34.29	0.99	26.68	137	0.67
207	8.58	34.05	2.51	157	400	7.53	34.32	0.47	26.83	123	0.80
					500	6.60	34.36	0.33	27.00	107	0.92
232	8.39	34.13	2.07	149							
271	8.73	34.30	1.14	141							
332	7.92	34.25	0.85	133							
408	7.49	34.32	0.44	122							
484	6.72	34.35	0.33	109							
565	6.14	34.36	0.35	102							

120.60 PAOLINA-T; April 24, 1959; 0800 GCT; 27°12.5'N, 116°28.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, partly cloudy; sea, slight; wire angle, 09°.

1	17.74	33.79		351	0	(17.74)	(33.79)		(24.43)	(351)	(0.00)
11	17.74	33.80		351	10	17.74	33.80		24.43	351	0.04
31	18.10	33.98		346	20	18.00	33.93		24.47	347	0.07
41	18.16	34.01		344	30	18.08	33.98		24.48	346	0.10
51	18.19	34.04		343	50	18.18	34.04		24.51	343	0.17
65	17.84	33.99		339	75	17.25	33.94		24.66	329	0.26
80	16.92	33.91		323	100	14.62	33.77		25.12	285	0.34
100	14.62	33.77		285	150	10.97	33.80		25.86	215	0.46
123	12.14	33.68		244	200	10.21	34.14		26.26	177	0.56
143	11.22	33.76		222	250	9.53	34.22		26.45	159	0.65
171	10.50	33.88		200	300	8.60	34.22		26.59	146	0.72
200	10.21	34.14		177	400	7.12	34.25		26.83	123	0.86
229	9.79	34.19		166	500	6.39	34.29		26.96	110	0.99
268	9.30	34.25		154							
327	7.95	34.18		139							
401	7.10	34.25		122							
475	6.56	34.27		114							
556	6.02	34.33		103							

120.70 PAOLINA-T; April 24, 1959; 0136 GCT; 26°54'N, 117°10.5'W; sounding, 2000+ fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 04°.

1	18.50	33.95	5.35	357	0	(18.50)	(33.95)	(5.35)	(24.37)	(357)	(0.00)
11	18.02	33.87	5.40	352	10	18.06	33.87	5.39	24.42	352	0.04
32	17.89	33.87	5.33	349	20	17.93	33.87	5.35	24.44	350	0.07
57	17.72	33.83	5.37	347	30	17.89	33.87	5.33	24.45	349	0.10
67	17.40	33.78	5.40	344	50	17.89	33.87	5.33	24.45	349	0.18
77	17.30	33.78	5.35	342	75	17.32	33.78	5.36	24.52	343	0.26
92	16.90	33.76	5.34	334	100	16.46	33.74	5.18	24.70	326	0.35
108	15.86	33.71	4.90	315	150	11.50	33.72	3.50	25.70	230	0.49
133	12.97	33.68	4.00	259	200	10.77	34.05	2.20	26.10	192	0.60
153	11.40	33.75	3.42	226	250	10.29	34.32	1.20	26.40	164	0.69
178	11.14	33.95	2.69	206	300	9.22	34.32	1.11	26.57	148	0.77
207	10.68	34.10	2.02	188	400	7.66	34.25	0.92	26.76	130	0.91
237	10.48	34.29	1.33	170	500	6.73	34.32	0.51	26.94	113	1.04
277	9.76	34.35	1.07	153							
337	8.31	34.23	1.20	140							
412	7.54	34.25	0.85	128							
486	6.82	34.31	0.53	114							
567	6.38	34.36	0.46	105							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

120.80

PAOLINA-T; April 23, 1959; 2003 GCT; 26°37'N, 117°46.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, cloudy; sea, slight; wire angle, 06°.

1	18.53	34.03		352	0	(18.53)	(34.03)		(24.42)	(352)	(0.00)
11	18.59	34.11		348	10	18.58	34.11		24.46	348	0.04
32	18.70	34.15		348	20	18.65	34.13		24.46	348	0.07
57	18.54	34.07		349	30	18.70	34.15		24.46	348	0.10
67	17.70	33.87		344	50	18.53	34.07		24.45	349	0.17
77	17.68	33.95		338	75	17.69	33.93		24.55	340	0.26
92	16.32	33.88		312	100	15.40	33.83		25.01	296	0.34
107	14.53	33.78		282	150	10.80	33.69		25.81	220	0.47
132	11.97	33.73		236	200	10.29	34.10		26.22	180	0.57
152	10.74	33.70		218	250	9.51	34.23		26.45	159	0.66
177	10.59	33.95		196	300	9.00	34.29		26.59	146	0.74
206	10.19	34.13		177	400	7.67	34.29		26.79	127	0.88
236	9.66	34.21		163	500	6.79	34.33		26.95	112	1.00
276	9.22	34.26		153							
336	8.56	34.31		138							
410	7.54	34.29		125							
485	6.89	34.33		114							
566	6.42	34.35		106							

120.90

PAOLINA-T; April 23, 1959; 1035, 1227 GCT; 26°15'N, 118°25'W; sounding, 2450 fm; wind, 300°, force 2; weather, cloudy; sea, slight; wire angle, 05, 06°.

1	18.70	34.22	5.08	342	0	(18.70)	(34.22)	(5.08)	(24.52)	(342)	(0.00)
11	18.72	34.15	5.20	347	10	18.72	34.15	5.20	24.47	347	0.03
32	18.70	34.18	5.22	345	20	18.71	34.16	5.21	24.47	347	0.07
57	18.71	34.20	5.24	344	30	18.70	34.18	5.22	24.49	345	0.10
67	18.70	34.16	5.16	347	50	18.71	34.20	5.24	24.50	344	0.17
77	18.68	34.18	5.19	344	75	18.69	34.17	5.18	24.49	345	0.26
92	15.16	33.75	4.73	297	100	14.56	33.73	4.58	25.11	286	0.34
107	14.00	33.72	4.45	276	150	11.35	33.79	3.21	25.79	222	0.47
133	12.16	33.68	4.03	244	200	9.48	33.95	2.75	26.24	179	0.57
152	11.26	33.80	3.12	220	250	8.82	34.13	2.00	26.49	155	0.66
177	9.98	33.82	3.10	196	300	8.36	34.23	1.42	26.64	141	0.73
206	9.38	33.98	2.65	175	400	7.40	34.30	0.67	26.84	122	0.87
236	8.94	34.10	2.17	159	500	6.67	34.36	0.33	26.98	108	0.99
276	8.62	34.19	1.68	148							
335	7.96	34.27	1.06	132							
409	7.33	34.31	0.61	121							
485	6.78	34.35	0.36	110							
566	6.26	34.41	0.28	100							
3868	1.65	34.66	2.97	36							
3966	1.60	34.68	2.93	34							
4065	1.60	34.60a)	2.46a)								

130.30

STRANGER; April 10, 1959; 0132 GCT; 26°29'N, 113°29'W; sounding, 40 fm; wind, 280°, force 5; weather, partly cloudy; sea, rough; wire angle, 09°.

2	16.10	33.96	4.81	302	0	(16.10)	(33.96)	(4.81)	(24.95)	(302)	(0.00)
12	16.10	33.90	4.81	306	10	16.10	33.91	4.81	24.91	305	0.03
32	14.32	33.89	3.39	270	20	15.49	33.89	4.30	25.03	294	0.06
52	12.82	33.93	2.55	238	30	14.52	33.89	3.53	25.24	274	0.09
					50	12.92	33.93	2.58	25.60	240	0.14

a) Nansen bottle may have leaked.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

130.35 STRANGER; April 10, 1959; 0418 GCT; 26°19'N, 113°48.5'W; sounding, 240 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 13°.

2	17.56	33.89	5.35	340	0	(17.56)	(33.89)	(5.35)	(24.55)	(340)	(0.00)
12	17.58	33.89	5.34	340	10	17.57	33.89	5.35	24.55	340	0.03
31	17.40	33.87	5.50	337	20	17.49	33.88	5.47	24.56	338	0.07
50	16.00	33.78	5.14	312	30	17.41	33.87	5.50	24.57	338	0.10
74	13.50	33.78	3.84	262	50	16.00	33.78	5.14	24.84	312	0.17
98	11.64	33.92	2.78	217	75	13.40	33.78	3.80	25.39	260	0.24
121	11.48	34.11	1.89	200	100	11.62	33.93	2.72	25.84	216	0.30
157	11.60	34.34	1.51	186	150	11.60	34.30	1.58	26.15	188	0.40
195	10.92	34.54	0.63	159	200	10.88	34.55	0.60	26.47	157	0.49
239	10.66	34.62	0.36	148	250	10.48	34.61	0.33	26.59	146	0.57
285	9.77	34.54	0.31	140	300	9.59	34.52	0.31	26.68	138	0.64
385	8.71	34.47	0.39	128							

130.40 STRANGER; April 10, 1959; 0820 GCT; 26°03.5'N, 114°16.5'W; sounding, 2000 fm; wind, 260°, force 5; weather, partly cloudy; sea, moderate; wire angle, 20°.

3	17.48	33.89	5.58	338	0	(17.48)	(33.89)	(5.58)	(24.57)	(338)	(0.00)
12	17.51	33.86	6.39u	340	10	17.50	33.86		24.54	340	0.03
30	17.49	33.90	5.58	337	20	17.51	33.88		24.56	339	0.07
40	17.40	33.84	5.64	339	30	17.49	33.90	5.58	24.58	337	0.10
54	17.06	33.85	5.63	331	50	17.19	33.85	5.63	24.61	334	0.17
68	16.28	33.80	5.64	318	75	15.71	33.79	5.39	24.90	306	0.25
90	14.35	33.75	4.46	280	100	13.40	33.73	4.20	25.35	263	0.32
109	12.53	33.72	4.04	248	150	10.68	33.94	2.85	26.03	199	0.44
126	11.28	33.72	3.81	225	200	9.85	34.24	2.19	26.40	164	0.53
141	10.75	33.87	3.10	205	250	9.57	34.36	1.11	26.55	150	0.61
169	10.55	34.06	2.33	188	300	9.19	34.42	0.58	26.66	139	0.68
198	9.85	32.23	2.20	164	400	8.03	34.42	0.37	26.83	122	0.82
225	9.80	34.34	1.33	155	500	7.02	34.44	0.23	27.00	107	0.94
269	9.38	34.38	0.93	145							
320	9.06	34.46	0.36	135							
398	8.06	34.42	0.37	123							
478	7.22	34.45	0.23	109							
559	6.49	34.42	0.27	102							

130.50 STRANGER; April 10, 1959; 1300 GCT; 25°49'N, 114°45'W; sounding, 1825 fm; wind, direction missing, force 1; weather, cloudy; sea, moderate; wire angle, 05°.

2	20.54	34.51	5.08	366	0	(20.54)	(34.51)	(5.08)	(24.27)	(366)	(0.00)
12	20.56	34.57	5.20	363	10	20.56	34.56	5.17	24.30	363	0.04
32	20.57	34.54	5.12	365	20	20.57	34.56	5.17	24.29	364	0.07
42	20.56	34.54	5.16	365	30	20.57	34.54	5.12	24.29	365	0.11
57	19.68	34.42	5.32	351	50	20.36	34.52	5.25	24.32	361	0.18
71	18.35	34.18	4.91	336	75	18.03	34.14	4.83	24.62	333	0.27
96	14.72	33.93	3.71	275	100	14.70	33.93	3.70	25.24	274	0.35
116	13.36	34.09	2.34	236	150	11.81	34.28	1.59	26.08	194	0.46
136	12.11	34.16	2.04	208	200	11.56	34.63	0.59	26.41	163	0.55
156	11.75	34.34	1.35	188	250	10.86	34.59	0.41	26.50	154	0.63
185	11.72	34.60	0.73	168	300	9.80	34.56	0.43	26.66	139	0.71
220	11.26	34.63	0.44	158	400	8.60	34.49	0.32	26.81	125	0.85
251	10.84	34.59	0.41	154	500	7.32	34.45	0.30	26.96	110	0.97
300	9.80	34.56	0.43	139	600	6.40	34.45	0.18	27.09	98	1.08
355	9.12	34.52	0.37	131							
439	8.12	34.47	0.31	120							
522	7.04	34.45	0.29	107							
608	6.34	34.45	0.17	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

STRANGER: April 10, 1959; 1840 GCT; 25°31'N, 115°20'W; sounding, 2025 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 05°. 130.60

2	19.46	34.34	5.37	352	0	(19.46)	(34.34)	(5.37)	(24.42)	(352)	(0.00)
12	19.44	34.36	5.35	350	10	19.45	34.36	5.35	24.44	350	0.04
32	19.26	34.34	5.37	348	20	19.41	34.36	5.35	24.44	350	0.07
42	18.46	34.18	5.30	340	30	19.30	34.34	5.36	24.47	348	0.10
57	18.44	34.17	4.40	340	50	18.42	34.17	5.00	24.55	340	0.17
72	18.38	34.16	5.52	339	75	18.20	34.14	5.50	24.58	336	0.26
98	15.53	33.90	4.39	294	100	15.50	33.90	4.37	25.04	293	0.34
118	13.52	33.86	3.64	256	150	13.05	34.36	1.44	25.91	210	0.46
138	12.94	34.19	2.09	221	200	12.19	34.68	0.40	26.33	170	0.56
158	13.14	34.49	0.93	203	250	11.31	34.67	0.28	26.48	156	0.65
187	12.42	34.67	0.46	176	300	10.32	34.61	0.26	26.62	143	0.72
223	11.78	34.68	0.35	163	400	8.39	34.48	0.37	26.83	123	0.86
253	11.24	34.67	0.27	155	500	7.00	34.44	0.40	27.00	106	0.98
302	10.29	34.61	0.26	143	600	6.16	34.44	0.23	27.12	96	1.09
356	9.22	34.56	0.31	130							
440	7.66	34.42	0.41	117							
525	6.77	34.45	0.39	102							
610	6.08	34.44	0.21	95							

STRANGER; April 11, 1959; 2140 GCT; 26°04.5'N, 112°48'W; sounding, 45 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°. 133.25

2	17.26	34.29	4.70	304	0	(17.26)	(34.29)	(4.70)	(24.93)	(304)	(0.00)
27	16.68	34.16	4.03	300	10	16.70	34.16	4.04	24.97	300	0.03
47	14.87	34.18	1.16	260	20	16.68	34.16	4.04	24.97	300	0.06
67	13.91	34.20	1.13	238	30	16.60	34.16	3.91	24.98	298	0.09
77	12.90	34.22	1.06	218	50	14.84	34.18	1.15	25.40	259	0.14
					75	13.22	34.21	1.10	25.76	224	0.21

STRANGER; April 11, 1959; 1855 GCT; 25°52'N, 113°08'W; sounding, 108 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 05°. 133.30

2	18.84	34.29	4.99	341	0	(18.84)	(34.29)	(4.99)	(24.54)	(341)	(0.00)
12	18.80	34.29	5.19	340	10	18.81	34.29	5.19	24.55	340	0.03
32	18.69	34.22	5.18	342	20	18.76	34.26	5.19	24.54	341	0.07
52	15.31	34.00	3.21	282	30	18.71	34.22	5.18	24.53	342	0.10
77	13.07	34.04	2.60	234	50	16.12	34.03	3.54	25.00	297	0.17
102	11.94	34.19	1.73	202	75	13.18	34.04	2.64	25.63	237	0.23
127	11.64	34.31	1.36	188	100	12.00	34.18	1.80	25.97	204	0.29
157	11.46	34.49	0.70	172	150	11.47	34.45	0.83	26.28	175	0.39

STRANGER; April 11, 1959; 1130 GCT; 25°34.5'N, 113°45.5'W; sounding, 1500 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 26°. 133.40

2	18.10	34.00	5.47	344	0	(18.10)	(34.00)	(5.47)	(24.50)	(344)	(0.00)
10	18.11	34.00	5.43	344	10	18.11	34.00	5.43	24.50	344	0.03
33	18.23	34.05	5.41	344	20	18.15	34.02	5.42	24.50	344	0.07
61	18.29	34.09	5.43	342	30	18.21	34.04	5.42	24.50	344	0.10
70	17.28	33.97	5.24	327	50	18.29	34.08	5.42	24.52	342	0.17
88	14.49	33.79	4.52	280	75	16.60	33.91	5.11	24.79	316	0.25
101	12.76	33.78	3.54	248	100	12.90	33.78	3.60	25.49	250	0.33
115	12.04	33.79	3.52	234	150	11.72	34.28	1.38	26.10	192	0.44
141	12.08	34.23	1.55	202	200	10.89	34.50	0.75	26.43	161	0.53
159	11.38	34.31	1.29	184	250	10.02	34.47	0.62	26.55	150	0.61
185	11.26	34.49	0.75	168	300	9.48	34.49	0.41	26.66	139	0.68
216	10.46	34.48	0.75	155	400	8.41	34.48	0.22	26.82	124	0.82
242	10.12	34.46	0.66	151	500	7.22	34.45	0.23	26.97	109	0.94
286	9.63	34.48	0.46	142	600	(6.18)	(34.43)	(0.15)	(27.10)	(97)	(1.05)
344	8.98	34.49	0.29	131							
437	8.02	34.47	0.21	119							
521	6.95	34.44	0.23	106							
594	6.22	34.43	0.15	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
133.50	STRANGER; April 11, 1959; 0513 GCT; 25°14.5'N, 114°24'W; sounding, 1665 fm; wind, 320°, force 5; weather, cloudy; sea, moderate; wire angle, 15°.										
2	20.74	34.57	-	368	0	(20.74)	(34.57)		(24.26)	(368)	(0.00)
12	20.74	34.54	5.24	370	10	20.74	34.54		24.24	370	0.04
31	20.76	34.55	5.22	369	20	20.75	34.55	5.22	24.24	369	0.07
55	20.29	34.47	5.52	363	30	20.76	34.55	5.22	24.24	369	0.11
64	20.26	34.50	5.29	360	50	20.52	34.50	5.38	24.27	366	0.18
75	19.80	34.40	5.29	356	75	19.80	34.40	5.29	24.38	356	0.27
89	17.38	34.14	4.34	317	100	15.78	34.02	3.96	25.07	290	0.36
103	15.43	34.01	3.83	284	150	12.88	34.24	1.78	25.85	216	0.48
127	14.24	34.10	2.78	253	200	11.22	34.36	1.16	26.26	177	0.58
147	13.14	34.24	1.85	221	250	10.52	34.51	0.66	26.50	154	0.67
171	11.77	34.24	1.62	195	300	10.07	34.54	0.48	26.60	145	0.75
200	11.22	34.36	1.16	177	400	8.56	34.49	0.38	26.81	125	0.89
228	10.76	34.47	0.86	161	500	7.24	34.48	0.23	27.00	107	1.01
267	10.40	34.53	0.56	150							
324	9.77	34.54	0.44	140							
397	8.60	34.49	0.39	125							
471	7.59	34.48	0.25	112							
549	6.82	34.49	0.21	101							
133.60	STRANGER; April 10, 1959; 2325 GCT; 24°54.5'N, 115°01'W; sounding, 2450 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.										
3	20.60	34.53	5.27	367	0	(20.60)	(34.53)	(5.27)	(24.26)	(367)	(0.00)
13	20.60	34.52	5.16	367	10	20.60	34.53	5.20	24.26	367	0.04
33	20.48	34.54	5.35	363	20	20.60	34.52	5.16	24.26	367	0.07
43	19.70	34.40	5.24	353	30	20.54	34.53	5.23	24.28	366	0.11
57	18.74	34.18	5.49	346	50	19.10	34.25	5.37	24.44	350	0.18
71	18.46	34.17	5.47	340	75	18.35	34.16	5.42	24.57	338	0.27
95	17.00	34.04	4.69	316	100	16.30	34.04	4.16	24.96	300	0.35
115	14.36	34.09	2.90	256	150	13.40	34.38	1.32	25.85	216	0.48
134	13.98	34.33	1.75	230	200	12.67	34.73	0.32	26.27	176	0.58
154	13.30	34.41	1.20	212	250	11.98	34.79	0.14	26.45	159	0.66
181	13.06	34.67	0.44	188	300	11.06	34.74	0.17	26.58	146	0.74
216	12.34	34.75	0.25	168	400	8.95	34.60	0.20	26.84	122	0.88
244	12.04	34.79	0.14	160	500	7.38	34.54	0.14	27.03	104	1.00
292	11.23	34.75	0.15	148	600	9.28	34.52	0.08	27.17	91	1.10
347	10.08	34.69	0.21	134							
430	8.42	34.57	0.17	117							
514	7.18	34.54	0.14	102							
600	6.28	34.52	0.08	91							
137.23	STRANGER; April 12, 1959; 0154 GCT; 25°34'N, 112°18.5'W; sounding, 40 fm; wind, 260°, force 2; weather, partly cloudy; sea, moderate; wire angle, 01°.										
2	19.02	34.29	5.28	345	0	(19.02)	(34.29)	(5.28)	(24.49)	(345)	(0.00)
12	19.02	34.31	5.28	344	10	19.02	34.31	5.28	24.51	344	0.03
32	17.47	34.22	4.31	313	20	19.01	34.31	5.28	24.51	344	0.07
52	14.66	34.01	3.15	268	30	18.20	34.27	4.73	24.68	327	0.10
					50	15.00	34.04	3.29	25.25	273	0.16
137.30	STRANGER; April 12, 1959; 0501 GCT; 25°20.5'N, 112°44.5'W; sounding 180 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 03°.										
2	18.52	34.20	5.32	339	0	(18.52)	(34.20)	(5.32)	(24.55)	(339)	(0.00)
12	18.52	34.19	5.28	340	10	18.52	34.19	5.29	24.54	340	0.03
32	18.14	34.13	5.27	336	20	18.52	34.19	5.27	24.54	340	0.07
52	15.74	33.89	4.33	299	30	18.28	34.15	5.27	24.58	337	0.10
77	13.60	33.95	2.96	251	50	16.30	33.92	4.62	24.88	309	0.17
102	13.00	34.22	1.80	220	75	13.71	33.94	3.04	25.45	254	0.24
127	12.78	34.49	0.74	196	100	13.01	34.18	1.94	25.78	223	0.30
168	11.68	34.58	0.34	169	150	12.16	34.57	0.47	26.24	179	0.40
207	11.06	34.58	0.23	158	200	11.15	34.58	0.24	26.44	160	0.48
256	10.67	34.57	0.19	152	250	10.70	34.57	0.19	26.52	153	0.56
306	10.44	34.57	0.18	148	300	10.46	34.57	0.18	26.56	149	0.64

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

STRANGER; April 12, 1959; 0755 GCT; 25°10'N, 113°04.5'W; sounding, 595 fm; wind, 300°, force 2; weather, missing; sea, slight; wire angle, 04°. 137.35

2	18.98	34.29	5.24	344	0	(18.98)	(34.29)	(5.24)	(24.51)	(344)	(0.00)
12	18.98	34.27	4.98	345	10	18.98	34.27	4.98	24.49	345	0.03
32	18.84	34.26	4.93	343	20	18.98	34.27	4.98	24.49	345	0.07
42	17.78	34.12	5.04	328	30	18.95	34.27	4.95	24.50	344	0.10
52	16.48	34.00	4.44	307	50	16.75	34.02	4.61	24.84	312	0.17
67	14.20	33.93	3.08	264	75	13.55	33.91	3.02	25.46	253	0.24
82	13.03	33.90	3.00	244	100	11.62	33.89	2.80	25.81	219	0.30
102	11.60	33.89	2.79	219	150	11.70	34.32	0.62	26.14	189	0.40
126	10.76	34.01	2.39	195	200	10.90	34.54	0.43	26.45	159	0.49
146	11.69	34.29	0.70	190	250	10.66	34.61	0.33	26.56	149	0.57
176	11.14	34.52	0.45	164	300	10.05	34.59	0.28	26.64	141	0.64
207	10.86	34.54	0.42	158	400	8.32	34.49	0.28	26.85	121	0.78
236	10.75	34.60	0.36	151	500	7.39	34.46	0.20	26.96	110	0.90
275	10.42	34.61	0.27	146							
336	9.41	34.55	0.29	134							
406	8.22	34.49	0.28	120							
481	7.53	34.47	0.21	112							
562	6.86	34.43	0.19	106							

STRANGER; April 12, 1959; 1039 GCT; 25°00'N, 113°23.5'W; sounding, 1680 fm; wind, 300°, force 3; weather, missing; sea, slight; wire angle, 08°. 137.40

2	18.60	34.11	5.29	348	0	(18.60)	(34.11)	(5.29)	(24.46)	(348)	(0.00)
12	18.58	34.08	5.28	349	10	18.59	34.08	5.28	24.45	349	0.03
32	18.25	34.05	5.34	344	20	18.25	34.04	5.33	24.49	345	0.07
41	17.88	33.99	5.33	340	30	18.25	34.05	5.34	24.50	344	0.10
56	16.67	33.95	5.13	315	50	16.68	33.95	5.13	24.81	315	0.17
71	14.48	33.83	3.97	277	75	13.98	33.83	3.70	25.31	267	0.24
96	12.76	33.92	2.94	237	100	12.61	33.94	2.87	25.66	234	0.31
115	12.19	34.00	2.50	221	150	11.34	34.21	1.56	26.12	190	0.41
136	11.65	34.14	1.85	201	200	10.60	34.46	0.77	26.45	159	0.50
155	11.23	34.23	1.50	187	250	10.17	34.49	0.54	26.55	150	0.58
184	10.52	34.34	1.19	166	300	9.62	34.48	0.42	26.63	142	0.66
218	10.72	34.56	0.44	154	400	8.40	34.46	0.24	26.81	125	0.80
249	10.18	34.49	0.54	150	500	7.12	34.43	0.22	26.98	109	0.92
298	9.63	34.48	0.43	142	600	6.12	34.43	0.21	27.11	96	1.03
353	9.08	34.50	0.26	132							
438	7.86	34.43	0.23	120							
522	6.88	34.43	0.21	106							
607	6.08	34.43	0.21	96							

STRANGER; April 12, 1959; 1540 GCT; 24°40'N, 114°02'W; sounding, 1930 fm; wind, 320°, force 1; weather, cloudy; sea, moderate; wire angle, 04°. 137.50

5	20.30	34.55	5.06	358	0	20.3	(34.55)	(5.06)	(24.36)	(358)	(0.00)
15	20.30	34.51	5.06	361	10	20.30	34.54	5.06	24.35	358	0.04
34	20.32	34.51	4.99	360	20	20.31	34.51	4.99	24.33	360	0.07
60	19.96	34.40	5.09	360	30	20.32	34.51	4.99	24.33	360	0.11
70	19.68	34.34	5.12	357	50	20.25	34.50	5.05	24.33	360	0.18
80	19.05	34.23	4.95	350	75	19.43	34.30	5.07	24.40	354	0.27
96	17.15	34.00	4.59	322	100	16.30	34.00	3.99	24.94	303	0.35
111	15.76	34.02	3.50	290	150	13.20	34.33	1.53	25.86	215	0.48
136	14.08	34.22	2.05	241	200	11.42	34.40	1.01	26.25	178	0.58
156	12.90	34.34	1.43	209	250	10.93	34.58	0.61	26.48	156	0.67
181	11.84	34.36	1.22	188	300	10.21	34.60	0.41	26.62	143	0.75
211	11.29	34.43	0.89	173	400	8.81	34.55	0.22	26.82	124	0.89
241	11.03	34.56	0.68	160	500	7.52	34.47	0.20	26.95	112	1.01
281	10.48	34.60	0.48	147							
341	9.66	34.58	0.27	135							
421	8.52	34.53	0.21	121							
491	7.63	34.47	0.20	114							
572	6.76	34.47	0.26	101							

SIO
CCOFI
5904

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

137.60 STRANGER; April 12, 1959; 2050 GCT; 24°20'N, 114°39.5'W; sounding, 1965 fm; wind, 280°, force 2; weather, cloudy; sea, rough; wire angle, 05°.

2	20.77	34.54	5.10	370	0	(20.77)	(34.54)	(5.10)	(24.23)	(370)	(0.00)
12	20.59	34.56	4.94	364	10	20.62	34.56	4.95	24.28	365	0.04
32	20.50	34.56	5.01	362	20	20.55	34.56	4.95	24.30	363	0.07
42	20.22	34.49	5.03	360	30	20.52	34.56	5.00	24.31	362	0.11
52	19.86	34.43	5.13	355	50	20.00	34.45	5.10	24.37	357	0.18
68	19.68	34.40	5.15	353	75	19.37	34.32	5.16	24.43	351	0.27
82	18.88	34.19	5.18	348	100	17.10	33.98	4.49	24.74	322	0.36
102	16.82	33.96	4.39	318	150	11.72	33.84	3.10	25.76	224	0.49
127	13.33	33.74	3.98	261	200	11.31	34.39	1.05	26.27	176	0.59
146	11.80	33.78	3.37	230	250	10.89	34.56	0.44	26.48	156	0.68
177	11.48	34.24	1.47	190	300	10.25	34.59	0.39	26.61	144	0.76
207	11.24	34.42	0.96	173	400	8.99	34.53	0.18	26.78	128	0.90
237	11.04	34.55	0.47	160	500	7.69	34.48	0.23	26.93	113	1.03
277	10.56	34.58	0.43	150							
336	9.80	34.60	0.29	136							
411	8.84	34.52	0.18	127							
486	7.84	34.48	0.23	115							
566	7.04	34.45	0.20	107							

137.70 STRANGER; April 13, 1959; 0117 GCT; 23°59.5'N, 115°18'W; sounding, 1950 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 13°.

2	21.22	34.60	5.01	378	0	(21.22)	(34.60)	(5.01)	(24.14)	(378)	(0.00)
12	21.18	34.58	4.94	378	10	21.19	34.58	4.94	24.14	378	0.04
32	21.12	34.58	4.94	376	20	21.15	34.58	4.94	24.15	377	0.08
41	21.11	34.59	4.88	376	30	21.12	34.58	4.94	24.15	377	0.11
52	21.10	34.59	4.77	375	50	21.10	34.59	4.80	24.17	375	0.19
66	20.32	34.45	5.11	365	75	20.13	34.42	5.12	24.30	363	0.28
80	20.02	34.40	5.12	362	100	18.73	34.23	4.65	24.52	342	0.37
99	18.83	34.24	4.69	344	150	12.78	34.00	2.47	25.68	232	0.52
125	14.97	33.92	3.80	280	200	10.60	34.15	1.83	26.21	182	0.62
143	13.32	33.99	2.60	242	250	10.00	34.33	1.19	26.45	159	0.71
171	11.48	34.00	2.29	208	300	9.44	34.39	0.74	26.59	146	0.79
201	10.59	34.15	1.82	182	400	8.45	34.43	0.43	26.78	128	0.93
230	10.32	34.29	1.36	167	500	7.20	34.44	0.26	26.97	110	1.06
268	9.74	34.35	1.05	153							
325	9.22	34.42	0.54	140							
400	8.45	34.43	0.43	128							
477	7.48	34.45	0.26	112							
556	6.58	34.40	0.26	104							

137.80 STRANGER; April 13, 1959; 0603 GCT; 23°40'N, 115°55'W; sounding, 2130 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 05°.

2	21.10	34.56	4.97	378	0	(21.10)	(34.56)	(4.97)	(24.14)	(378)	(0.00)
12	21.14	34.56	4.93	378	10	21.13	34.56	4.93	24.14	378	0.04
32	21.11	34.57	4.98	377	20	21.13	34.56	4.93	24.14	378	0.08
62	21.02	34.57	4.95	375	30	21.12	34.57	4.98	24.15	377	0.11
72	20.98	34.53	4.93	376	50	21.06	34.57	4.97	24.16	376	0.19
88	19.92	34.36	5.03	362	75	20.97	34.53	4.93	24.16	376	0.28
103	17.94	34.13	4.51	331	100	18.10	34.14	4.57	24.62	333	0.37
117	15.50	33.93	4.01	291	150	12.11	33.81	3.37	25.66	234	0.51
142	12.49	33.77	3.64	244	200	10.58	34.08	2.18	26.16	186	0.62
162	11.65	33.90	2.83	218	250	10.18	34.36	1.19	26.45	159	0.71
192	10.74	34.04	2.30	192	300	9.68	34.45	0.66	26.60	145	0.79
222	10.30	34.23	1.73	171	400	8.33	34.42	0.41	26.80	126	0.93
253	10.17	34.38	1.12	158	500	7.24	34.43	0.25	26.96	110	1.06
302	9.64	34.45	0.65	144	600	6.42	34.45	0.22	27.08	99	1.17
357	8.90	34.42	0.48	135							
442	7.83	34.43	0.34	119							
527	6.98	34.43	0.23	107							
611	6.35	34.45	0.22	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
STRANGER; April 14, 1959; 1010 GCT; 24°45.5'N, 112°24'W; sounding, 60 fm; wind, 300°, force 1, weather, clear; sea, slight; wire angle, 00°.											140.30
2	19.75	34.34	5.21	359	0	(19.75)	(34.34)	(5.21)	(24.35)	(359)	(0.00)
12	19.74	34.31	5.13	361	10	19.74	34.31	5.13	24.32	361	0.04
32	19.55	34.36	5.20	352	20	19.71	34.32	5.16	24.35	359	0.07
52	16.78	34.10	4.31	306	30	19.59	34.35	5.20	24.40	354	0.11
76	13.20	34.27	1.73	220	50	17.15	34.12	4.50	24.83	313	0.17
103	12.70	34.37	1.23	203	75	13.26	34.26	1.81	25.79	222	0.24
					100	12.73	34.36	1.27	25.98	204	0.30
STRANGER; April 14, 1959; 0727 GCT; 24°35.5'N, 112°42.5'W; sounding, 470 fm; wind 320°, force 2; weather, clear; sea, moderate; wire angle, 14°.											140.35
2	19.52	34.16	5.13	366	0	(19.52)	(34.16)	(5.13)	(24.27)	(366)	(0.00)
12	19.50	34.17	5.10	366	10	19.50	34.17	5.10	24.27	366	0.04
31	18.84	34.18	5.23	349	20	19.43	34.17	5.12	24.30	364	0.07
40	18.41	34.22	5.30	336	30	18.92	34.18	5.23	24.44	350	0.11
55	16.74	33.91	5.28	320	50	16.90	33.94	5.28	24.74	322	0.18
71	14.86	33.91	3.68	280	75	14.60	33.91	3.51	25.24	274	0.25
90	13.10	33.93	2.80	243	100	12.54	34.02	2.45	25.74	226	0.31
114	11.98	34.12	2.01	208	150	11.99	34.48	0.86	26.21	182	0.42
134	11.64	34.20	1.62	196	200	11.74	34.65	0.27	26.39	165	0.50
152	12.00	34.52	0.70	179	250	11.03	34.67	0.20	26.54	151	0.59
181	11.86	34.65	0.30	167	300	10.15	34.64	0.20	26.67	138	0.66
215	11.62	34.65	0.24	164	400	8.74	34.53	0.21	26.82	124	0.80
244	11.14	34.67	0.19	152	500	7.39	34.46	0.19	26.96	110	0.92
292	10.27	34.65	0.20	140	600	(6.33)	(34.46)	(0.20)	(27.11)	(96)	(1.03)
345	9.62	34.58	0.19	134							
429	8.30	34.51	0.22	120							
514	7.22	34.46	0.19	108							
598	6.34	34.46	0.20	96							
STRANGER; April 14, 1959; 0447 GCT: 24°27'N, 112°56'W; sounding, 1450 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 14°.											140.40
2	19.51	34.12	5.24	369	0	(19.51)	(34.12)	(5.24)	(24.24)	(369)	(0.00)
12	18.96	34.09	5.23	358	10	19.01	34.10	5.23	24.34	359	0.04
31	18.56	34.07	5.28	350	20	18.81	34.08	5.24	24.39	355	0.07
40	17.76	33.98	5.24	338	30	18.58	34.07	5.28	24.44	350	0.11
55	17.14	33.96	5.11	325	50	17.28	33.97	5.16	24.68	328	0.18
71	15.65	33.82	4.55	303	75	15.15	33.79	4.37	25.03	294	0.25
95	12.99	33.75	3.50	254	100	12.79	33.81	3.28	25.52	246	0.32
114	12.46	33.96	2.70	229	150	11.73	34.42	0.95	26.21	182	0.43
134	11.72	34.16	1.78	200	200	11.13	34.59	0.40	26.46	158	0.52
153	11.74	34.45	0.84	179	250	10.62	34.60	0.23	26.55	150	0.60
181	11.48	34.58	0.49	166	300	9.62	34.50	0.38	26.65	140	0.67
215	10.90	34.59	0.36	154	400	8.10	34.42	0.30	26.83	123	0.81
245	10.70	34.60	0.23	150	500	7.19	34.44	0.25	26.98	109	0.93
292	9.77	34.51	0.38	142	600	(6.15)	(34.49)	(0.10)	(27.16)	(92)	(1.04)
346	8.91	34.49	0.30	130							
428	7.74	34.40	0.31	120							
512	7.08	34.45	0.22	107							
596	6.20	34.49	0.10	92							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
140.50	STRANGER; April 13, 1959; 2217 GCT; 24°05.5'N, 113°39.5'W; sounding, 1780 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough, wire angle, 24°.										
2	20.86	34.56	5.03	371	0	(20.86)	(34.56)	(5.03)	(24.22)	(371)	(0.00)
11	20.58	34.52	4.97	366	10	20.59	34.52	4.97	24.26	367	0.04
29	19.96	34.38	5.14	361	20	20.39	34.48	5.02	24.29	364	0.07
38	19.44	34.29	5.19	355	30	19.93	34.38	5.15	24.32	361	0.11
52	18.70	34.20	5.13	344	50	18.82	34.22	5.13	24.49	345	0.18
65	17.80	33.99	5.44	338	75	17.30	33.94	5.40	24.65	330	0.26
88	15.56	33.82	4.89	300	100	14.40	33.86	3.74	25.25	273	0.34
107	14.14	33.87	3.54	267	150	11.02	33.92	2.77	25.95	207	0.46
124	12.88	33.86	3.20	244	200	11.17	34.42	1.01	26.32	171	0.56
142	11.30	33.84	3.05	216	250	10.83	34.60	0.34	26.51	154	0.64
166	10.88	34.11	2.02	190	300	10.31	34.61	0.24	26.61	144	0.72
196	11.15	34.40	1.11	173	400	8.68	34.51	0.27	26.81	125	0.86
223	11.08	34.52	0.62	163	500	7.58	34.51	0.20	26.98	109	0.98
266	10.64	34.61	0.27	148							
321	10.09	34.60	0.24	140							
391	8.80	34.51	0.28	127							
467	7.94	34.52	0.19	113							
549	6.96	34.47	0.21	104							
140.50	STRANGER; April 13, 1959; 2325 GCT;[a] 24°05.5'N, 113°39.5'W; sounding, 1780 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 13°.										
2	20.86	34.54	5.07	373	0	(20.86)	(34.54)	(5.07)	(24.20)	(373)	(0.00)
11	20.60	34.54	5.05	366	10	20.62	34.54	5.05	24.27	366	0.04
31	19.78	34.37	5.19	358	20	20.56	34.53	5.06	24.28	365	0.07
35	19.54	34.32	5.12	356	30	19.82	34.39	5.18	24.35	358	0.11
40	19.24	34.26	5.17	352	50	18.55	34.08	5.28	24.45	349	0.18
45	19.02	34.25	5.10	348	75	17.85	34.18	4.37	24.70	325	0.26
50	18.55	34.08	5.28	349	100	14.34	33.84	4.12	25.25	273	0.34
55	18.46	34.11	5.16	344	150	11.15	33.95	2.68			
60	18.02	34.04	5.29	340	200	(11.18)	(34.43)	(1.02)			
65	17.70	33.96	5.43	338							
69	17.60	33.96	5.44	335							
74	17.86	34.18	4.37	325							
79	17.58	34.13	4.37	322							
84	16.35	33.89	4.94	312							
89	15.58	33.84	4.95	300							
95	14.83	33.78	4.46	288							
148	11.20	33.93	2.75	208							
197	11.18	34.42	1.02	172							
140.60	STRANGER; April 13, 1959; 1640 GCT; 23°45'N, 114°08.5'W; sounding, 1850 fm; wind, 300°, force 2; weather, overcast; sea, rough, wire angle, 04°.										
2	21.26	34.65	4.92	375	0	(21.26)	(34.65)	(4.92)	(24.18)	(375)	(0.00)
12	21.26	34.61	4.88	378	10	21.26	34.61	4.89	24.14	378	0.04
32	21.26	34.63	4.70	376	20	21.26	34.62	4.77	24.15	377	0.08
63	21.15	34.62	4.69	374	30	21.26	34.63	4.70	24.16	376	0.11
73	20.50	34.47	4.84	368	50	21.24	34.63	4.69	24.16	376	0.19
89	19.44	34.32	4.66	353	75	20.37	34.45	4.84	24.27	366	0.28
104	18.07	34.21	4.09	328	100	18.60	34.24	4.36	24.56	338	0.37
121	15.97	34.19	2.55	282	150	16.09	34.86	1.39	25.64	236	0.51
145	16.11	34.82	1.49	240	200	11.71	34.40	1.12	26.20	182	0.62
165	15.50	34.83	1.15	225	250	11.26	34.60	0.43	26.44	160	0.71
195	11.78	34.37	1.19	186	300	10.36	34.56	0.41	26.57	147	0.79
225	11.50	34.53	0.66	169	400	9.04	34.53	0.24	26.76	130	0.93
255	11.18	34.60	0.41	158	500	7.46	34.40	0.31	26.91	116	1.06
306	10.24	34.56	0.41	146	600	6.47	34.42	0.27	27.06	101	1.18
360	9.65	34.56	0.27	136							
446	8.30	34.47	0.24	122							
531	7.04	34.38	0.33	112							
607	6.42	34.43	0.26	100							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

STRANGER; April 15, 1959; 0335 GCT; 24°19'N, 111°48'W; sounding, 40 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 06°. 143.26

2	19.38	34.26	5.20	356	0	(19.38)	(34.26)	(5.20)	(24.38)	(356)	(0.00)
12	19.20	34.27	5.17	351	10	19.25	34.27	5.18	24.42	352	0.04
32	17.92	34.22	4.66	324	20	18.90	34.26	5.08	24.50	344	0.07
52	16.06	34.19	3.40	284	30	18.20	34.23	4.80	24.66	330	0.10
					50	16.07	34.19	3.40	25.13	284	0.16

STRANGER; April 15, 1959; 0540 GCT; 24°10.5'N, 112°03'W; sounding, 110 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 15°. 143.30

2	19.98	34.35	5.08	364	0	(19.98)	(34.35)	(5.08)	(24.30)	(364)	(0.00)
12	19.92	34.33	4.84	364	10	19.93	34.34	4.88	24.30	364	0.04
31	19.00	34.28	4.50	345	20	19.90	34.33	4.80	24.30	364	0.07
50	15.56	33.92	4.08	293	30	19.87	34.32	4.79	24.30	363	0.11
75	14.03	34.06	2.28	252	50	15.56	33.92	4.08	25.04	293	0.17
100	13.25	34.42	1.13	210	75	14.03	34.06	2.28	25.47	252	0.24
124	12.64	34.58	0.53	187	100	13.25	34.42	1.13	25.91	210	0.30
153	12.12	34.63	0.33	173	150	12.18	34.63	0.34	26.29	174	0.40

STRANGER; April 15, 1959; 0830 GCT; 23°58.5'N, 112°21.5'W; sounding, 640 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 13°. 143.35

3	20.12	34.05a)	5.23	390	0	(20.12)	(34.05)	(5.23)	(24.02)	(390)	(0.00)
13	20.12	34.33a)	5.25	369	10	20.12	34.29	5.24	24.21	372	0.04
32	18.26	34.04a)	5.26	345	20	19.60	34.26	5.25	24.32	362	0.07
42	18.19	34.16a)	4.94	335	30	18.30	34.04	5.26	24.48	346	0.11
56	17.17	34.00	4.80	322	50	17.78	34.10	4.87	24.66	329	0.18
72	15.74	33.96	3.71	294	75	15.71	33.96	3.67	25.04	293	0.26
95	14.57	34.17	3.06	254	100	14.03	34.30	2.72	25.66	234	0.32
114	13.35	34.52	1.94	204	150	12.82	34.59	0.60	26.14	189	0.43
134	13.23	34.56	0.80	200	200	11.66	34.62	0.36	26.38	166	0.52
152	12.77	34.60	0.59	188	250	10.86	34.63	0.23	26.54	151	0.60
180	12.02	34.63	0.43	172	300	10.12	34.58	0.18	26.63	142	0.68
214	11.42	34.62	0.32	162	400	8.90	34.51	0.18	26.77	128	0.82
243	10.97	34.63	0.26	152	500	7.69	34.46	0.14	26.92	114	0.94
293	10.21	34.59	0.17	143	600	(6.63)	(34.47)	(0.16)	(27.07)	(100)	(1.06)
347	9.63	34.53	0.23	138							
431	8.46	34.49	0.17	124							
515	7.51	34.46	0.14	112							
599	6.64	34.47	0.16	100							

STRANGER; April 15, 1959; 1121 GCT; 23°47.5'N, 112°39'W; sounding, 1670 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 08°. 143.40

3	19.44	34.20	5.30	362	0	(19.44)	(34.20)	(5.30)	(24.32)	(362)	(0.00)
13	19.43	34.18	5.27	363	10	19.43	34.18	5.28	24.31	363	0.04
33	19.24	34.19	5.28	358	20	19.40	34.18	5.27	24.32	362	0.07
63	18.40	34.13	5.29	342	30	19.30	34.19	5.28	24.34	359	0.11
73	17.94	34.09	5.18	334	50	18.84	34.18	5.29	24.44	349	0.18
88	15.73	33.83	4.94	304	75	17.78	34.07	5.14	24.64	331	0.26
103	14.74	33.93	3.75	276	100	14.97	33.91	3.99	25.16	282	0.34
117	12.78	33.91	2.95	238	150	11.80	34.25	1.57	26.07	195	0.46
142	11.84	34.14	2.01	204	200	11.00	34.49	0.76	26.40	164	0.56
162	11.69	34.34	1.18	186	250	10.32	34.55	0.50	26.57	148	0.64
191	11.12	34.47	0.82	167	300	9.85	34.58	0.26	26.67	138	0.71
221	10.77	34.51	0.64	158	400	8.42	34.57	0.23	26.90	117	0.84
250	10.32	34.55	0.50	148	500	7.26	34.50	0.19	27.01	106	0.96
299	9.86	34.58	0.26	138	600	6.27	34.46	0.19	27.12	96	1.06
354	9.02	34.57	0.24	126							
439	7.97	34.57	0.22	110							
524	6.98	34.47	0.17	104							
608	6.20	34.46	0.19	96							

a) The first four salinity samples were assumed to be listed out of order. Their original listing, according to increasing depth, was 34.33, 34.05, 34.16, and 34.04‰.

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
143.50	STRANGER; April 15, 1959; 1659 GCT; 23°29.5'N, 113°14.5'W; sounding, 1355 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.										
2	20.32	34.41	4.87	368	0	(20.32)	(34.41)	(4.87)	(24.25)	(368)	(0.00)
12	20.22	34.34	5.02	371	10	20.24	34.34	5.01	24.22	371	0.04
32	20.08	34.35	5.13	366	20	20.16	34.34	5.08	24.24	369	0.07
62	19.18	34.22	5.14	354	30	20.10	34.35	5.11	24.25	368	0.11
71	19.22	34.29	5.04	350	50	19.80	34.31	5.14	24.31	362	0.18
86	17.86	34.10	4.71	331	75	19.20	34.29	5.02	24.45	349	0.27
101	15.38	33.98	3.63	285	100	15.50	33.98	3.70	25.10	287	0.35
116	13.84	34.00	2.58	252	150	12.09	34.21	1.59	25.98	204	0.48
141	12.20	34.09	2.01	214	200	11.49	34.53	0.56	26.34	170	0.57
160	12.00	34.33	1.15	193	250	10.73	34.58	0.44	26.52	152	0.65
190	11.62	34.52	0.61	172	300	10.04	34.56	0.34	26.62	143	0.73
220	11.19	34.54	0.48	163	400	8.59	34.50	0.30	26.82	124	0.87
249	10.74	34.58	0.44	152	500	7.35	34.43	0.32	26.95	112	0.99
299	10.05	34.56	0.34	143	600	6.42	34.44	0.21	27.08	100	1.10
354	9.22	34.55	0.26	130							
437	8.10	34.47	0.33	120							
522	7.12	34.43	0.30	109							
606	6.39	34.44	0.20	99							
143.60	STRANGER; April 15, 1959; 2220 GCT; 23°10.5'N, 113°55'W; sounding, 1980 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 11°.										
3	20.99	34.45	5.09	382	0	(20.99)	(34.45)	(5.09)	(24.10)	(382)	(0.00)
13	20.64	34.45	4.97	374	10	20.77	34.45	5.00	24.16	377	0.04
32	20.58	34.43	4.98	373	20	20.61	34.44	4.98	24.19	374	0.08
42	20.55	34.49	4.90	368	30	20.59	34.43	4.98	24.19	374	0.11
56	19.88	34.33	5.11	362	50	20.55	34.49	4.90	24.25	368	0.19
72	19.33	34.41	5.00	344	75	19.15	34.39	4.94	24.54	340	0.28
97	16.78	33.96	4.26	317	100	16.25	33.96	3.92	24.92	305	0.36
110	14.96	33.99	3.07	275	150	13.12	34.17	1.87	25.75	226	0.49
135	13.80	34.04	2.21	248	200	11.11	34.38	1.06	26.29	174	0.59
155	12.86	34.21	1.78	218	250	10.55	34.53	0.46	26.52	153	0.68
185	11.26	34.26	1.37	185	300	9.97	34.51	0.38	26.59	146	0.76
218	10.98	34.48	0.73	164	400	8.57	34.51	0.25	26.82	124	0.89
248	10.58	34.53	0.47	153	500	7.06	34.43	0.25	26.98	108	1.02
297	10.01	34.51	0.39	146	600	6.32	34.47	0.23	27.12	96	1.12
352	9.19	34.52	0.30	132							
434	8.12	34.49	0.24	118							
519	6.79	34.42	0.25	106							
603	6.31	34.47	0.23	96							
147.20	STRANGER; April 17, 1959; 0525 GCT; 23°56'N, 111°03.5'W; sounding, 63 fm; wind, 310°, force 4; weather, clear; sea, moderate; wire angle, 10°.										
2	18.69	34.23	5.26	341	0	(18.69)	(34.23)	(5.26)	(24.54)	(341)	(0.00)
12	18.68	34.23	5.31	341	10	18.68	34.23	5.31	24.54	341	0.04
31	17.24	34.19	4.47	311	20	18.65	34.23	5.30	24.54	340	0.07
51	15.46	34.04	3.52	282	30	17.26	34.19	4.48	24.85	311	0.10
75	14.04	34.32	1.62	233	50	15.46	34.04	3.53	25.16	282	0.16
					75	14.04	34.32	1.62	25.67	233	0.22

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m	
STRANGER; April 17, 1959; 0118, 0151 GCT; 23°51.5'N, 111°20'W; sounding, 310 fm; wind, 310°, force 6; weather, clear; sea, rough; wire angle, 20°, missing.												147.25
3	21.26	34.45	5.33	390	0	(21.26)	(34.45)	(5.33)	(24.02)	(390)	(0.00)	
13	21.30	34.47	4.77	389	10	21.29	34.47	4.78	24.03	389	0.04	
32	19.98	34.32	5.10	366	20	21.29	34.47	4.77	24.03	389	0.08	
41	19.24	34.23	5.17	356	30	20.20	34.35	5.04	24.23	370	0.12	
56	17.64	34.18	4.05	320	50	17.90	34.18	4.27	24.70	326	0.18	
69	15.87	34.14	2.76	284	75	15.39	34.18	2.76	25.27	271	0.26	
92	14.28	34.34	2.80	236	100	13.59	34.40	1.38	25.82	218	0.32	
110	13.36	34.42	1.00	212	150	12.46	34.62	0.42	26.22	180	0.42	
126	13.04	34.56	0.61	196	200	11.75	34.69	0.26	26.42	162	0.51	
142	12.62	34.61	0.45	184	250	10.89	34.62	0.22	26.52	152	0.59	
171	12.12	34.64	0.34	172	300	10.21	34.62	0.19	26.64	141	0.67	
201	11.74	34.69	0.26	162	400	8.69	34.55	0.16	26.84	122	0.80	
229	11.16	34.61	0.23	157	500	7.47	34.52	0.16	26.99	108	0.92	
274	10.56	34.63	0.19	146								
326	9.86	34.61	0.18	136								
405	8.60	34.55	0.16	121								
486	7.61	34.52	0.15	109								
561	7.02	34.51	0.21	102								
STRANGER; April 16, 1959; 2207 GCT; 23°34'N, 111°42'W; sounding, 180 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 08°.												147.30
2	20.68	34.39	5.14	379	0	(20.68)	(34.39)	(5.14)	(24.13)	(379)	(0.00)	
12	20.69	34.38	5.23	380	10	20.68	34.38	5.22	24.12	380	0.04	
32	20.56	34.36	5.27	378	20	20.66	34.38	5.24	24.13	379	0.08	
51	19.14	34.31	4.94	346	30	20.59	34.37	5.27	24.14	378	0.11	
75	14.93	34.24	3.05	256	50	19.34	34.32	5.02	24.43	351	0.19	
100	13.50	34.32	1.52	222	75	14.93	34.24	3.05	25.42	256	0.26	
125	12.68	34.45	0.91	196	100	13.50	34.32	1.52	25.79	222	0.32	
164	12.38	34.63	0.43	178	150	12.50	34.58	0.59	26.19	184	0.42	
204	11.70	34.64	0.21	165	200	11.78	34.64	0.21	26.38	166	0.51	
254	10.98	34.62	0.23	154	250	11.04	34.62	0.23	26.50	154	0.60	
304	10.12	34.60	0.23	141	300	10.22	34.60	0.23	26.62	142	0.67	
STRANGER; April 16, 1959; 1545 GCT; 23°14.5'N, 112°18.5'W; sounding, 1725 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.												147.40
2	21.32	34.60	5.11	380	0	(21.32)	(34.60)	(5.11)	(24.12)	(380)	(0.00)	
12	21.32	34.58	5.01	382	10	21.32	34.58	5.01	24.11	382	0.04	
32	20.04	34.33	5.07	368	20	20.40	34.40	5.04	24.21	372	0.08	
42	19.58	34.25	5.27	362	30	20.12	34.34	5.06	24.25	368	0.11	
56	18.30	34.22	4.67	333	50	18.36	34.22	4.70	24.61	334	0.18	
71	16.71	34.04	4.28	310	75	16.29	34.08	3.74	25.00	297	0.26	
96	15.34	34.23	2.43	266	100	15.07	34.26	2.18	25.40	258	0.33	
117	14.04	34.34	1.52	231	150	12.48	34.47	0.88	26.10	192	0.44	
137	12.84	34.42	1.07	202	200	11.43	34.54	0.62	26.34	168	0.54	
156	12.34	34.49	0.80	188	250	10.94	34.61	0.32	26.50	154	0.62	
185	11.63	34.52	0.63	173	300	10.43	34.57	0.37	26.56	148	0.70	
218	11.24	34.58	0.60	162	400	9.08	34.56	0.32	26.78	127	0.84	
249	10.96	34.61	0.32	154	500	7.52	34.48	0.29	26.96	110	0.96	
298	10.45	34.57	0.37	149	600	6.66	34.48	0.28	27.08	100	1.08	
352	9.66	34.58	0.34	135								
437	8.60	34.54	0.31	122								
521	7.20	34.47	0.28	106								
607	6.62	34.48	0.28	99								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
147.50	STRANGER; April 16, 1959; 0908 GCT; 22°55'N, 112°55'W; sounding, 1950 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 10°.										
3	21.55	34.55	5.01	390	0	(21.55)	(34.55)	(5.01)	(24.02)	(390)	(0.00)
13	21.50	34.54	4.99	389	10	21.53	34.54	5.00	24.03	389	0.04
33	20.80	34.45	4.98	378	20	21.50	34.54	4.99	24.03	389	0.08
42	19.73	34.33	5.07	359	30	21.35	34.52	4.98	24.06	387	0.12
57	18.30	34.16	4.97	337	50	19.30	34.28	5.06	24.42	352	0.19
73	17.10	34.09	4.13	314	75	17.02	34.09	4.07	24.83	313	0.27
97	14.54	34.22	2.23	250	100	14.35	34.24	2.10	25.55	244	0.34
118	13.32	34.37	1.22	214	150	12.23	34.51	0.69	26.18	184	0.45
136	12.30	34.46	0.99	189	200	11.51	34.64	0.34	26.42	162	0.54
156	12.21	34.52	0.63	183	250	10.71	34.63	0.30	26.56	148	0.62
187	11.69	34.62	0.41	166	300	10.00	34.60	0.26	26.66	139	0.69
221	11.22	34.65	0.26	156	400	8.51	34.54	0.21	26.86	120	0.83
251	10.69	34.63	0.30	148	500	7.39	34.53	0.17	27.02	105	0.95
300	10.00	34.60	0.26	139	600	6.46	34.49	0.26	27.11	96	1.05
353	9.12	34.54	0.21	130							
437	8.08	34.54	0.21	114							
521	7.18	34.52	0.17	103							
605	6.41	34.49	0.28	96							
147.60	STRANGER; April 16, 1959; 0302 GCT; 22°34'N, 113°34'W; sounding, 2430 fm; wind, 340°, force 4; weather, clear; sea, moderate; wire angle, 10°.										
2	22.59	34.58	5.08	416	0	(22.59)	(34.58)	(5.08)	(23.75)	(416)	(0.00)
12	22.62	34.60	4.99	415	10	22.62	34.60	4.99	23.76	415	0.04
31	22.54	34.62	5.11	412	20	22.60	34.62	5.05	23.78	413	0.08
41	21.04	34.38	5.29	389	30	22.56	34.62	5.10	23.79	412	0.12
56	20.84	34.52	5.40	374	50	20.93	34.46	5.37	24.12	380	0.20
70	19.12	34.29	4.15	347	75	18.50	34.25	3.79	24.60	335	0.29
96	16.04	34.18	2.83	284	100	15.50	34.18	2.62	25.25	273	0.37
115	14.15	34.27	1.85	238	150	13.11	34.63	0.64	26.10	192	0.49
135	13.42	34.51	1.10	207	200	11.74	34.61	0.52	26.36	168	0.58
154	13.02	34.64	0.59	190	250	10.81	34.63	0.33	26.54	150	0.66
183	12.28	34.63	0.50	176	300	10.06	34.60	0.37	26.64	140	0.74
216	11.30	34.60	0.53	161	400	8.53	34.49	0.29	26.82	124	0.87
246	10.86	34.63	0.33	151	500	7.36	34.44	0.27	26.95	111	1.00
297	10.11	34.60	0.37	141	600	6.49	34.45	0.23	27.08	99	1.11
350	9.27	34.54	0.35	123							
433	8.10	34.47	0.28	120							
518	7.18	34.44	0.26	109							
603	6.46	34.45	0.22	99							

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
60.65-S	IV-24	1700	37°25.0'	123°57.5'	1900	190°	2	overcast	moderate	11.62	33.30
63.55-S	24	0715	37°13.0'	122°49.0'	138	180°	2	overcast	moderate	12.04	33.44
67.50-S	23	1800	36°49.0'	122°05.0'	61	130°	2	cloudy	moderate	11.21	33.69
70.55-S	23	1040	36°03.0'	122°02.0'	670	340°	3	partly cloudy	moderate	12.79	33.49
70.65-S	23	0530	35°43.0'	122°45.0'	1360	320°	2	cloudy	slight	12.81	33.50
73.51-O	25	1809	35°32.0'	121°25.5'	335	160°	2	cloudy	moderate	12.73	33.52
73.65-O	26	0348	35°05.5'	122°19.5'	2100	180°	2	overcast	rough	14.43	33.31
77.50-O	25	1257	35°02.5'	120°51.0'	74	090°	2	overcast	moderate	12.94	33.47
77.65-O	25	0345	34°33.0'	121°53.0'	2000+	130°	4	overcast	rough	13.88	33.40
80.65-O	23	1240	33°59.5'	121°31.0'	1800	340°	3	overcast	moderate	13.97	33.44
80.75-O	23	1909	33°38.5'	122°11.0'	2000	-	1	overcast	rough	13.97	33.33
80.85-O	24	0150	33°17.5'	122°52.0'	2160	180°	3	cloudy	very rough	14.18	33.27
83.65-O	21	2326	33°23.5'	121°05.5'	1900	310°	4	cloudy	moderate	13.86	33.57
83.75-O	21	1717	33°05.5'	121°48.5'	2100	340°	3	cloudy	rough	14.18	33.48
83.85-O	21	1020	32°45.0'	122°28.0'	2200	300°	2	cloudy	rough	14.83	33.39
87.50-O	19	1945	33°20.0'	119°39.5'	42	270°	4	overcast	moderate	15.84	33.60
87.65-O	20	0740	32°47.5'	120°47.5'	2000	290°	6	overcast	very rough	14.70	33.52
87.75-O	20	1610	32°26.0'	121°32.0'	2000+	320°	4	overcast	high	14.58	33.49
87.85-O	20	2130	32°10.0'	122°04.0'	2000+	320°	4	cloudy	very rough	15.26	33.41

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
90.65-O	IV-15	1822	32°10.0'	120°16.5'	2000	320°	4	cloudy	very rough	15.68	33.53
90.75-O	15	1157	31°52.0'	120°58.0'	2000	330°	4	cloudy	rough	15.62	33.41
90.85-O	15	0510	31°34.0'	121°39.0'	2200	340°	4	cloudy	rough	16.24	33.61
93.35-O	13	0624	32°40.0'	117°52.5'	300	-	1	fog	moderate	17.26	33.58
93.45-O	13	1253	32°20.0'	118°32.5'	1000	260°	2	cloudy	rough	15.27	33.55
93.55-O	13	1906	32°00.0'	119°13.0'	880	320°	4	cloudy	rough	15.44	33.55
93.65-O	14	0135	31°40.5'	119°53.5'	2000	310°	5	cloudy	very rough	15.90	33.55
93.75-O	14	0750	31°21.5'	120°34.0'	2200	320°	4	overcast	very rough	15.56	33.48
93.85-O	14	1425	31°01.5'	121°14.5'	2000	320°	3	cloudy	very rough	15.98	33.51
97.35-O	11	1545	32°04.0'	117°29.0'	600	300°	3	partly cloudy	moderate	16.98	33.55
97.45-O	11	0947	31°46.0'	118°05.5'	650	320°	4	clear	moderate	16.14	33.55
97.55-O	11	0320	31°26.0'	118°49.0'	300	310°	5	cloudy	rough	15.86	33.53
97.75-O	10	1208	30°45.5'	120°14.5'	1950	330°	4	cloudy	rough	15.52	33.40
97.85-O	10	0555	30°26.0'	120°51.0'	2050	330°	4	cloudy	moderate	16.14	33.48
100.29-O	8	0507	31°42.0'	116°43.5'	56	300°	1	missing	slight	14.26	33.60
100.35-O	8	1000	31°30.5'	117°06.5'	600	280°	2	overcast	moderate	17.16	33.58
100.45-O	8	1624	31°10.5'	117°47.5'	950	290°	2	overcast	moderate	16.76	33.60
100.55-O	8	2250	30°51.0'	118°26.5'	1400	290°	3	cloudy	rough	16.70	33.64
100.65-O	9	0455	30°31.0'	119°07.0'	1700	300°	4	missing	rough	16.75	33.66

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
100.75-O	IV-9	1139	30°10.0'	119°48.0'	2000	320°	3	overcast	rough	15.93	33.42
100.85-O	9	1746	29°49.0'	120°30.0'	2080	320°	3	overcast	moderate	16.42	33.53
103.55-P	9	0340	30°16.0'	118°02.5'	1300	270°	4	cloudy	moderate	16.72	33.62
103.65-P	9	1100	29°56.5'	118°43.0'	1900	320°	4	overcast	moderate	16.46	33.51
103.75-P	9	1710	29°35.0'	119°24.0'	1950	330°	3	overcast	moderate	17.52	33.85
103.85-P	9	2302	29°16.5'	120°03.5'	2040	320°	3	overcast	moderate	17.76	33.96
107.45-P	11	1245	30°00.0'	117°03.5'	1250	320°	5	partly cloudy	rough	16.99	33.68
107.55-P	11	0620	29°41.0'	117°41.5'	1850	330°	5	cloudy	rough	17.43	33.93
107.65-P	10	2330	29°22.5'	118°21.0'	2040	330°	4	overcast	moderate	17.52	33.87
107.75-P	10	1710	29°02.5'	119°01.5'	2000	360°	3	overcast	rough	17.56	33.95
107.85-P	10	1115	28°42.0'	119°39.0'	2000	330°	5	overcast	rough	17.64	33.86
110.45-P	12	1300	29°25.5'	116°43.0'	900	300°	5	overcast	rough	17.09	33.71
110.55-P	12	1915	29°07.5'	117°20.0'	2100	330°	5	cloudy	rough	17.06	33.69
110.65-P	13	0145	28°53.0'	118°04.5'	2000	320°	3	cloudy	rough	17.28	33.78
110.75-P	18	0800	28°26.5'	118°37.5'	2000+	320°	4	overcast	moderate	18.19	34.04
110.85-P	18	1435	28°07.0'	119°19.0'	2000+	330°	4	cloudy	rough	17.65	33.84
113.45-P	20	0330	28°52.0'	116°19.0'	1050	330°	4	cloudy	rough	17.05	33.68
113.55-P	19	2110	28°35.0'	117°00.0'	1900	320°	4	overcast	rough	17.00	33.71
113.65-P	19	1600	28°17.5'	117°33.0'	1800	290°	4	overcast	moderate	17.10	33.73

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
113.75-P	IV-19	0940	27°55.0'	118°12.5'	2000+	320°	4	cloudy	moderate	17.67	33.84
113.85-P	19	0310	27°33.0'	118°52.0'	2100	320°	4	cloudy	rough	18.25	34.05
117.45-P	21	2232	28°13.0'	115°52.5'	1600	320°	4	partly cloudy	moderate	17.00	33.65
117.55-P	22	0526	27°56.0'	116°35.0'	2100	320°	4	overcast	moderate	16.98	33.64
117.65-P	22	1210	27°33.5'	117°16.0'	1400	330°	4	overcast	moderate	17.33	33.76
117.75-P	22	2030	27°08.5'	118°01.5'	2080	340°	3	cloudy	slight	18.05	33.98
117.85-P	23	0010	26°58.5'	118°24.0'	2000+	320°	3	cloudy	moderate	18.04	33.91
120.40-P	24	2138	27°56.5'	115°14.0'	24	270°	4	partly cloudy	slight	17.22	33.72
120.55-P	24	1120	27°23.5'	116°09.0'	2073	340°	2	partly cloudy	slight	17.61	33.73
120.65-P	24	0438	27°03.0'	116°48.5'	2000+	270°	2	partly cloudy	slight	18.25	34.00
120.75-P	23	2230	26°44.0'	117°29.5'	2000+	270°	2	cloudy	slight	17.88	33.77
120.85-P	23	1635	26°25.0'	118°07.0'	2000+	300°	2	partly cloudy	moderate	18.03	33.86
130.45-S	10	1015	25°59.0'	114°26.0'	1975	260°	5	partly cloudy	moderate	18.94	34.25
130.55-S	10	1545	25°39.0'	115°04.0'	1885	310°	3	cloudy	moderate	20.56	34.53
133.35-S	11	1424	25°44.5'	113°26.5'	380	300°	3	overcast	moderate	17.40	33.93
133.45-S	11	0750	25°24.5'	114°05.0'	1775	320°	5	overcast	moderate	20.63	34.52
133.55-S	11	0215	25°04.5'	114°43.0'	2000	310°	3	cloudy	moderate	20.77	34.52
137.45-S	12	1301	24°50.0'	113°42.5'	1900	300°	2	cloudy	moderate	20.70	34.54
137.55-S	12	1810	24°30.0'	114°20.5'	1860	320°	2	cloudy	moderate	20.88	34.54

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
140.45-S	IV-14	0210	24°20.0'	113°09.0'	1250	320°	2	partly cloudy	rough	19.74	34.33
140.55-S	13	1932	24°02.0'	114°00.0'	1775	320°	2	cloudy	moderate	21.00a)	34.60
143.45-S	15	1355	23°38.5'	112°56.0'	1750	310°	2	clear	moderate	19.79	34.23
143.55-S	15	1955	23°17.0'	113°38.0'	2100	310°	3	partly cloudy	moderate	20.79	34.52
147.35-S	16	1815	23°24.5'	112°00.0'	1630	340°	4	partly cloudy	rough	21.13	34.52
147.45-S	16	1150	23°06.0'	112°34.5'	1930	310°	4	clear	moderate	21.43	34.53
147.55-S	16	0615	22°44.5'	113°14.5'	1925	340°	4	clear	moderate	21.26	34.52

a) Alternate value, 21.44°C.

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60.60 BLACK DOUGLAS; May 25, 1959; 0828 GCT; 37°38.5'N, 123°29'W; sounding, 1580 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 29°.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{3}^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3}^{-5} 10 cm/g	ΔD dyn. m
1	11.36	33.40	5.94	250	0	(11.36)	(33.40)	(5.94)	(25.49)	(250)	(0.00)
9	11.34	33.40	6.04	250	10	11.34	33.40	6.04	25.49	250	0.02
24	10.30	33.42	5.16	231	20	10.72	33.41	5.56	25.61	239	0.05
31	9.90	33.46	4.93	223	30	9.92	33.45	4.95	25.78	223	0.07
41	9.85	33.56	5.31	214	50	9.75	33.61	5.26	25.93	208	0.12
52	9.72	33.62	5.19	207	75	9.46	33.70	4.42	26.04	198	0.17
68	9.46	33.68	4.34	199	100	9.35	33.81	4.21	26.15	187	0.22
82	9.46	33.71	4.68	196	150	8.28	33.97	2.13	26.44	160	0.30
94	9.48	33.77	4.72	192	200	7.61	34.04	1.63	26.60	144	0.38
107	8.97	33.82	3.33	180	250	7.15	34.09	1.37	26.70	135	0.45
125	8.55	33.89	2.31	169	300	6.89	34.10	1.09	26.75	131	0.52
142	8.37	33.95	2.21	162							
158	8.20	33.98	2.02	157							
181	7.78	34.02	1.81	148							
208	7.54	34.05	1.55	143							
255	7.11	34.09	1.36	134							
310	6.83	34.10	1.05	130							
369	6.50	34.14	0.82	120							

60.90 BLACK DOUGLAS; May 24, 1959; 1742 GCT; 36°37'N, 125°47'W; sounding, 2340 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 00°.

1	14.06	32.95	6.15	334	0	(14.06)	(32.95)	(6.15)	(24.61)	(334)	(0.00)
10	14.06	32.99	6.14	331	10	14.06	32.99	6.14	24.64	331	0.03
28	13.82	33.04	6.13	322	20	13.98	33.02	6.14	24.68	327	0.07
37	11.96	32.98	6.17	292	30	12.70	33.00	6.17	24.93	304	0.10
46	11.50	33.04	5.91	279	50	11.35	33.04	5.86	25.21	277	0.16
59	11.02	33.04	5.78	271	75	9.87	33.23	4.92	25.62	238	0.22
72	9.89	33.19	4.99	242	100	9.39	33.50	4.41	25.91	210	0.28
90	9.64	33.42	4.56	221	150	8.60	33.82	3.06	26.28	175	0.37
112	9.12	33.60	4.20	199	200	8.10	33.95	3.25	26.46	158	0.46
131	8.88	33.75	3.54	184	250	7.30	33.98	2.63	26.60	145	0.54
158	8.59	33.86	2.98	172	300	6.62	34.00	2.12	26.70	135	0.61
185	8.26	33.91	2.93	164	400	5.34	34.02	1.44	26.89	118	0.74
212	7.85	33.95	3.36	155	500	4.87	34.11	0.75	27.01	106	0.86
247	7.34	33.98	2.67	146							
301	6.60	34.00	2.11	134							
368	5.56	34.00	1.74	122							
436	5.16	34.05	1.08	114							
509	4.82	34.12	0.69	105							

63.80 BLACK DOUGLAS; May 24, 1959; 0835 GCT; 36°23'N, 124°38'W; sounding, 2200 fm; wind, 250°, force 2; weather, cloudy; sea, moderate; wire angle, 06°.

0	14.18	33.21	6.24	317	0	14.18	33.21	6.24	24.79	317	0.00
9	13.53	33.21	6.32	304	10	13.52	33.21	6.33	24.93	304	0.03
27	13.32	33.22	6.35	299	20	13.40	33.22	6.35	24.96	301	0.06
54	12.70	33.19	6.25	290	30	13.25	33.21	6.35	24.98	298	0.09
63	11.40	33.30	5.91	258	50	12.82	33.19	6.28	25.05	292	0.15
76	11.19	33.42	5.17	246	75	11.20	33.42	5.18	25.53	246	0.22
90	10.18	33.42	5.04	229	100	9.83	33.46	4.74	25.80	220	0.28
103	9.74	33.48	4.64	217	150	8.45	33.76	3.93	26.26	177	0.38
126	9.16	33.64	4.04	197	200	7.86	33.95	4.02	26.49	155	0.47
143	8.54	33.71a)	3.98	182	250	7.18	33.98	2.90	26.62	144	0.54
170	8.28	33.91a)	3.82	164	300	6.98	34.10	1.82	26.74	132	0.61
197	7.93	33.95	4.04	156	400	6.23	34.16	0.89	26.88	118	0.74
224	7.48	33.96	3.39	149	500	5.54	34.21	0.47	27.02	105	0.86
268	7.03	34.00	2.61	140							
318	6.93	34.14	1.41	128							
394	6.28	34.16	0.91	119							
470	5.74	34.20	0.54	109							
546	5.23	34.23	0.38	101							

a) Salinity samples at 143 and 170 meters appear to have been reversed; they are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{-5}T_3$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{-5}T_3$ 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; May 18, 1959; 0410 GCT; 34°58'N, 122°40'W; sounding, 2200 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 14°.											73.70
2	14.35	33.23	5.73	318	0	(14.35)	(33.23)	(5.73)	(24.77)	(318)	(0.00)
10	14.34	33.25	5.63	317	10	14.34	33.25	5.63	24.79	317	0.03
33	14.20	33.29	5.52	311	20	14.32	33.27	5.56	24.82	314	0.06
59	13.82	33.27	5.48	305	30	14.23	33.29	5.54	24.84	312	0.09
67	13.58a)	33.30	5.43	298	50	13.98	33.28	5.48	24.88	308	0.16
85	12.86	33.31	5.29	284	75	13.14	33.30	5.35	25.08	290	0.23
98	12.18	33.33	5.16	270	100	12.14	33.34	5.12	25.31	268	0.30
110	11.21	33.35	4.86	252	150	9.16	33.64	3.90	26.05	197	0.42
137	9.54	33.53	4.19	211	200	8.52	33.92	3.00	26.37	167	0.51
154	9.07	33.68	3.84	193							
181	8.72	33.84	3.72	175							
211	8.40	33.95	2.73	163							
236	8.06	34.02	2.53	153							
419b)	6.47	34.25	0.76	114							
499b)	5.86	34.22	0.48	109							
567b)	5.41	34.23	0.35	103							
BLACK DOUGLAS; May 14, 1959; 1623 GCT; 34°24'N, 122°16'W; sounding, 2100 fm; wind, 320°, force 4; weather, drizzle; sea, moderate; wire angle, 09°.											77.70
2	14.52	33.49	5.69	303	0	(14.52)	(33.49)	(5.69)	(24.93)	(303)	(0.00)
11	14.52	33.49	5.69	303	10	14.52	33.49	5.69	24.93	303	0.03
33	13.81	33.49	5.67	289	20	14.40	33.49	5.69	24.96	300	0.06
42	13.30	33.49	5.47	279	30	14.00	33.49	5.69	25.04	293	0.09
56	12.28	33.48	5.16	261	50	12.70	33.48	5.29	25.30	268	0.15
69	11.86	33.49	4.86	252	75	11.42	33.50	4.60	25.55	244	0.21
91	10.10	33.51	3.86	221	100	9.99	33.60	3.58	25.88	213	0.27
109	9.89	33.68	3.32	205	150	8.96	33.82	2.88	26.22	180	0.37
127	9.53	33.75	3.04	194	200	8.40	33.96	2.28	26.42	162	0.45
154	8.88	33.83	2.83	179	250	7.95	34.10	1.58	26.60	144	0.53
181	8.67	33.91	2.47	170	300	7.14	34.10	1.45	26.71	134	0.60
217	8.18	34.01	2.07	155	400	6.50	34.19	0.70	26.87	119	0.74
244	8.02	34.10	1.59	146	500	5.89	34.28	0.43	27.02	105	0.85
288	7.24	34.09	1.56	136	600	(5.24)	(34.32)		(27.13)	(94)	(0.96)
346	6.88	34.14	1.02	128							
435	6.28	34.22	0.55	114							
515	5.80	34.29	-	103							
583	5.35	34.31	0.34	96							
BLACK DOUGLAS; May 13, 1959; 1101 GCT; 34°09'N, 121°09'W; sounding, 1200 fm; wind, 150°, force 2; weather, overcast; sea, slight; wire angle, 02°.											80.60
1	14.63	33.66	5.64	293	0	(14.63)	(33.66)	(5.64)	(25.04)	(293)	(0.00)
10	14.61	33.55	5.56	301	10	14.61	33.55	5.56	24.96	301	0.03
28	14.24	33.53	5.40	294	20	14.49	33.54	5.47	24.98	298	0.06
37	12.96	33.55	4.77	268	30	14.13	33.53	5.36	25.04	292	0.09
51	11.39	33.57	3.96	238	50	11.39	33.57	3.97	25.61	239	0.14
64	10.55	33.67	3.46	216	75	9.92	33.71	3.22	25.98	203	0.20
86	9.41	33.74	3.03	193	100	9.26	33.78	2.89	26.14	188	0.25
104	9.20	33.79	2.83	186	150	9.05	33.97	2.34	26.31	171	0.34
122	9.00	33.82	2.77	181	200	8.65	34.14	1.44	26.52	152	0.42
139	8.94	33.91	2.52	173	250	8.16	34.22	1.12	26.66	139	0.49
167	9.04	34.05	1.80	165	300	7.64	34.28	0.94	26.78	128	0.56
198	8.67	34.14	1.45	152	400	6.66	34.21	0.64	26.87	119	0.69
225	8.39	34.20	1.28	144	500	5.89	34.28	0.40	27.02	105	0.81
270	7.98	34.24	0.99	135							
319	7.43	34.29	0.89	124							
395	6.70	34.21	0.68	120							
472	6.04	34.26	0.45	108							
549	5.70	34.31	0.35	100							

a) Mean value of 13.52 and 13.64°C.
b) Pretrip; depths too uncertain for interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}^{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}^{3}$ 10^{-5} cm/g	ΔD dyn. m

80.80 BLACK DOUGLAS; May 13, 1959; 2055 GCT; 33°29'N, 122°32'W; sounding, 2400 fm; wind, 280°, force 3; weather, clear; sea, moderate; wire angle, 00°.

1	14.66	33.48	5.73	307	0	(14.66)	(33.48)	(5.73)	(24.89)	(307)	(0.00)
10	14.19	33.46	5.73	298	10	14.19	33.46	5.73	24.98	298	0.03
28	13.49	33.49	5.79	282	20	13.64	33.49	5.76	25.12	286	0.06
55	13.35	33.48	5.66	281	30	13.47	33.49	5.77	25.15	282	0.09
64	13.31	33.64u	5.56		50	13.37	33.48	5.68	25.16	281	0.14
77	12.88	33.49	5.38	271	75	12.96	33.49	5.42	25.25	273	0.21
91	11.69	33.49	4.49	250	100	11.05	33.56	4.13	25.67	233	0.28
104	10.72	33.58	3.99	226	150	8.90	33.77	3.34	26.19	183	0.38
126	9.46	33.60	3.63	205	200	8.44	33.95	2.48	26.41	163	0.47
143	8.99	33.75	3.35	186	250	7.76	34.05	1.90	26.58	146	0.55
171	8.70	33.84	3.31	175	300	7.17	34.09	1.45	26.70	135	0.62
198	8.46	33.94	2.52	164	400	6.45	34.17	0.72	26.87	119	0.75
224	8.10	34.04	2.08	152	500	5.82	34.25	0.44	27.00	106	0.87
270	7.50	34.05	1.78	143							
319	6.99	34.11	1.27	131							
395	6.48	34.17	0.72	120							
473	5.97	34.23	0.48	109							
550	5.54	34.29	0.35	100							

80.100 BLACK DOUGLAS; May 11, 1959; 1431 GCT; 32°49'N, 123°54'W; sounding, 2200 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 06°.

1	15.18	33.36	5.69	326	0	(15.18)	(33.36)	(5.69)	(24.69)	(326)	(0.00)
10	15.16	33.37	5.53	325	10	15.16	33.37	5.53	24.70	325	0.03
28	15.18	33.33	5.56	328	20	15.17	33.35	5.54	24.69	326	0.06
55	15.16	33.35	5.54	326	30	15.18	33.33	5.56	24.67	328	0.10
64	14.92	33.34	5.56	322	50	15.18	33.34	5.55	24.68	327	0.16
78	13.90	33.28	5.74	306	75	14.15	33.28	5.71	24.85	311	0.24
91	12.78	33.32	5.51	282	100	11.80	33.38	5.11	25.38	260	0.32
104	11.40	33.40	4.90	251	150	9.15	33.69	4.08	26.09	193	0.43
127	9.96	33.52	3.95	218	200	8.55	33.92	3.60	26.36	167	0.52
144	9.28	33.65	4.12	198	250	7.76	33.99	2.44	26.54	150	0.60
171	8.84	33.80	3.94	180	300	6.96	34.00	2.15	26.66	139	0.68
198	8.58	33.91	3.62	168	400	6.12	34.10	1.08	26.85	121	0.81
225	8.22	34.34r	2.51		500	5.40	34.16	0.60	26.99	108	0.93
269	7.39	34.28r	2.42								
318	6.75	34.02	1.94	135							
395	6.15	34.09	1.11	121							
471	5.51	34.14	0.68	110							
548	5.22	34.20	0.49	103							

80.120 BLACK DOUGLAS; May 11, 1959; 0431 GCT; 32°10.5'N, 125°14'W; sounding, 2400 fm; wind, 360°, force 5; weather, cloudy; sea, very rough; wire angle, 22°.

3	15.88	33.53	5.51	329	0	(15.88)	(33.53)	(5.51)	(24.66)	(329)	(0.00)
11	15.88	33.54	5.40	328	10	15.88	33.54	5.41	24.67	328	0.03
32	15.90	33.51	5.38	330	20	15.89	33.53	5.40	24.67	328	0.06
55	15.87	33.53	5.39	329	30	15.90	33.51	5.38	24.65	330	0.10
64	15.68	33.53	5.45	324	50	15.89	33.52	5.39	24.66	330	0.16
80	15.18	33.52	5.54	314	75	15.31	33.52	5.53	24.79	317	0.24
93	14.97	33.57	5.48	306	100	14.87	33.62	5.48	24.95	301	0.32
105	14.76	33.66	5.48	295	150	11.54	33.60	4.79	25.60	239	0.46
130	12.66	33.55	5.15	262	200	9.00	33.71	3.87	26.12	190	0.57
147	11.62	33.56	4.87	243	250	8.32	33.95	3.58	26.43	161	0.66
200	9.00	33.71	3.87	190	300	7.40	33.96	3.01	26.57	148	0.74
225	8.68	33.91	3.74	170	400	6.04	34.00	2.03	26.78	128	0.88
267	8.04	33.96	3.47	157	500	5.40	34.12	0.83	26.96	110	1.01
324	6.96	33.97	2.68	141							
410	5.93	34.00	1.91	126							
489	5.42	34.11	0.93	112							
556	5.31	34.18	0.49	106							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T_3}^{-5}$	Z	T	S	O_2	σ_t	$\delta_{T_3}^{-5}$	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

BLACK DOUGLAS; May 10, 1959; 1559 GCT; 31°25.5'N, 126°50'W; sounding, 2000+ fm; wind, 340°, force 5; weather, rain; sea, very rough; wire angle, 12°. 80.145

3	16.58	33.69	5.29	332	0	(16.58)	(33.69)	(5.29)	(24.63)	(332)	(0.00)
11	16.56	33.71	5.38	330	10	16.56	33.71	5.37	24.65	330	0.03
34	16.57	33.69	5.29	332	20	16.56	33.70	5.34	24.64	331	0.07
60	16.58	33.70	5.35	331	30	16.56	33.69	5.30	24.64	331	0.10
69	17.00	33.93	5.29	324	50	16.57	33.69	5.29	24.63	332	0.16
87	17.08	34.04	5.44	318	75	17.03	33.98	5.39	24.74	321	0.25
100	17.10	34.10	5.38	314	100	17.10	34.10	5.38	24.82	314	0.33
113	15.76	33.94	5.31	296	150	13.53	33.78	5.03	25.37	262	0.47
140	14.02	33.79	5.11	271	200	9.80	33.69	4.03	25.98	203	0.59
157	13.17	33.78	4.95	255	250	8.63	33.89	3.39	26.33	170	0.69
183	10.68	33.63	4.20	222	300	7.90	33.99		26.52	152	0.77
214	9.34	33.73	3.91	193	400	6.49	34.07		26.78	128	0.92
241	8.78	33.86	3.49	175	500	5.69	34.15	0.68	26.95	112	1.04
285	8.10	33.96	3.06	157							
432	6.08	34.11	1.03	120							
511	5.62	34.16	0.63	110							
578	5.31	34.22	0.47	102							

BLACK DOUGLAS; May 12, 1959; 1228 GCT; 33°34'N, 120°45'W; sounding, 800 fm; wind, 100°, force 1; weather, overcast; sea, moderate; wire angle, 04°. 83.60

1	14.08	33.48	5.52	295	0	(14.08)	(33.48)	(5.52)	(25.02)	(295)	(0.00)
9	13.43	33.50	5.29	281	10	13.42	33.50	5.29	25.17	280	0.03
27	13.09	33.60	5.36	267	20	13.19	33.58	5.35	25.27	271	0.06
54	12.50	33.60	5.08	256	30	13.04	33.60	5.33	25.32	266	0.08
63	12.26	33.64	4.95	249	50	12.60	33.60	5.12	25.41	258	0.14
77	11.98	33.66	4.80	242	75	12.02	33.66	4.84	25.56	243	0.20
90	11.14	33.60	4.13	232	100	9.93	33.64	3.45	25.92	209	0.26
105	9.81	33.68	3.29	204	150	9.09	33.84	2.80	26.22	181	0.35
125	9.48	33.78	2.80	192	200	8.37	33.98	2.24	26.44	160	0.44
143	9.20	33.84	2.82	183	250	7.72	34.12	1.72	26.65	140	0.52
171	8.76	33.84	2.63	176	300	7.20	34.14	1.32	26.73	132	0.59
197	8.40	33.96	2.30	162	400	6.42	34.23	0.68	26.92	114	0.71
224	8.07	34.08	1.97	148	500	5.94	34.27	0.43	27.01	106	0.83
269	7.44	34.13	1.56	136							
318	7.06	34.14	1.24	130							
395	6.44	34.23	0.71	115							
472	6.07	34.25	0.48	109							
549	5.72	34.31	0.34	100							

BLACK DOUGLAS; May 8, 1959; 0204, 0232 GCT; 33°00'N, 120°21.5'W; sounding, 400 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 26°, 28°. 87.60

2	14.60	33.63	5.74	295	0	(14.60)	(33.63)	(5.74)	(25.02)	(295)	(0.00)
10	14.53	33.58	5.67	296	10	14.53	33.58	5.67	25.00	296	0.03
26	14.13	33.62	5.52	286	20	14.30	33.60	5.58	25.07	290	0.06
50	14.07	33.65	5.39	282	30	14.12	33.63	5.48	25.13	284	0.09
58	13.54	33.78r	5.12		50	14.07	33.65	5.39	25.16	282	0.14
70	12.49	33.57	4.68	258	75	11.93	33.56	4.39	25.51	248	0.21
82	11.08	33.57	4.01	233	100	9.87	33.67	3.56	25.96	206	0.27
94	10.12	33.64	3.70	212	150	8.73	33.89	2.66	26.32	171	0.36
114	9.42	33.75	3.21	193	200	8.19	34.02	2.10	26.50	154	0.45
130	9.16	33.79	3.04	186	250	7.58	34.06	1.79	26.62	142	0.52
154	8.64	33.91	2.60	169	300	7.20	34.15	1.38	26.74	131	0.59
177	8.43	34.15r	2.34		400	6.51	34.26	0.61	26.92	114	0.72
201	8.18	34.02	2.09	154	500	6.07	34.31	0.42	27.02	105	0.83
240	7.66	34.05	1.86	145							
285	7.32	34.13	1.51	134							
354	6.76	34.20	0.85	121							
432	6.35	34.29	0.47	109							
508	6.02	34.31	0.39	104							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.28	ORCA; May 7, 1959; 0525 GCT; 33°28.5'N, 117°47'W; sounding, 250 fm; wind, 120°, force 1; weather, clear; sea, slight; wire angle, 00°.										
1	18.65	33.60	6.17	386	0	(18.65)	(33.60)	(6.17)	(24.06)	(386)	(0.00)
11	15.82	33.53	5.74	327	10	16.20	33.53	5.85	24.60	335	0.04
31	12.14	33.56	3.43	252	20	15.45	33.53	5.57	24.76	320	0.07
51	11.12	33.66	3.09	227	30	12.30	33.56	3.53	25.43	256	0.10
76	10.42	33.69	3.17	213	50	11.15	33.66	3.09	25.73	227	0.15
101	9.94	33.80	2.64	197	75	10.43	33.69	3.17	25.88	213	0.20
126	9.62	33.89	2.45	186	100	9.95	33.80	2.65	26.05	197	0.25
166	9.32	34.05	1.92	169	150	9.42	33.99	2.17	26.28	175	0.35
206	9.06	34.19	1.51	155	200	9.10	34.18	1.55	26.48	156	0.43
256	8.57	34.22	1.37	145	250	8.62	34.22	1.40	26.59	146	0.51
306	8.20	34.24	0.94	138	300	8.23	34.24	1.00	26.66	139	0.58
90.32	ORCA; May 7, 1959; 0834 GCT; 33°20.5'N, 118°03'W; sounding, 410 fm; wind, 190°, force 1; weather, clear; sea, slight; wire angle, 02°.										
0	17.42	33.61	5.46	357	0	17.42	33.61	5.46	24.37	357	0.00
10	17.02	33.64	5.46	346	10	17.02	33.64	5.46	24.48	346	0.04
30	15.34	33.56	5.80	315	20	16.75	33.63	5.50	24.54	340	0.07
41	13.57	33.54	5.56	280	30	15.34	33.56	5.80	24.81	315	0.10
50	13.18	33.55	4.68	272	50	13.18	33.55	4.68	25.26	272	0.16
65	12.32	33.58	4.28	254	75	11.92	33.64	4.14	25.58	242	0.22
81	11.58	33.68	4.07	234	100	10.71	33.69	3.87	25.82	218	0.28
101	10.70	33.69	3.87	218	150	9.69	34.04	2.50	26.28	176	0.38
126	10.08	33.89	3.54	193	200	9.19	34.14	1.82	26.44	160	0.47
146	9.74	34.02	2.55	178	250	8.27	34.07	1.80	26.53	152	0.55
176	9.54	34.14	2.23	166	300	8.02	34.18	1.06	26.65	140	0.62
206	9.09	34.14	1.77	159	400	7.09	34.25	0.74	26.84	122	0.76
236	8.42	34.05	1.93	155	500	6.29	34.27	0.53	26.96	110	0.88
276	8.12	34.14	1.31	144							
336	7.88	34.24	0.83	134							
411	6.96	34.25	0.72	120							
486	6.35	34.27	0.53	111							
566	6.04	34.27	0.41	107							
90.37	ORCA; May 7, 1959; 1218 GCT; 33°11'N, 118°24'W; sounding, 640 fm; wind, 190°, force 1; weather, clear; sea, slight; wire angle, 03°.										
1	16.76	33.60	5.35	343	0	(16.76)	(33.60)	(5.35)	(24.52)	(343)	(0.00)
11	16.26	33.60	5.66	332	10	16.28	33.60	5.65	24.62	332	0.03
31	13.14	33.55	4.85	272	20	16.10	33.60	5.65	24.67	328	0.07
41	12.65	33.53	4.35	264	30	13.26	33.56	4.90	25.24	273	0.10
51	12.10	33.55	4.08	252	50	12.12	33.55	4.08	25.46	252	0.15
66	11.45	33.58	3.79	239	75	11.11	33.60	3.68	25.69	231	0.21
81	10.90	33.62	3.62	226	100	10.08	33.68	3.30	25.92	209	0.27
101	10.06	33.68	3.29	208	150	9.37	33.91	2.36	26.23	180	0.36
126	9.60	33.86	2.58	188	200	9.07	34.12	1.71	26.44	160	0.45
146	9.42	33.89	2.41a)	182	250	8.51	34.16	1.29	26.56	148	0.53
176	9.04	34.04	1.89	166	300	7.71	34.17	1.06	26.69	136	0.60
207	9.08	34.14	1.67	159	400	6.82	34.23	0.67	26.86	120	0.73
237	8.73	34.16	1.38	152	500	6.24	34.28	0.42	26.98	109	0.85
277	8.01	34.16	1.12	141							
337	7.28	34.20	0.95	128							
412	6.76	34.24	0.61	118							
487	6.31	34.27	0.43	110							
568	5.86	34.33	0.32	101							

a) Alternate value, 2.58 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; May 7, 1959; 1726 GCT; 32°56.5'N, 118°57'W; sounding, 975 fm; wind, 270°, force 1; weather, clear; sea, moderate; wire angle, 13°.											90.45
0	16.22	33.58	5.57	332	0	16.22	33.58	5.57	24.63	332	0.00
10	16.06	33.60	5.60	327	10	16.06	33.60	5.60	24.68	327	0.03
29	15.94	33.61	5.67	324	20	16.01	33.60	5.62	24.69	326	0.06
39	14.16	33.58	5.36	290	30	15.93	33.61	5.67	24.72	323	0.10
53	11.66	33.56	4.14	244	50	12.25	33.56	4.46	25.44	254	0.16
68	10.66	33.64	3.66	221	75	10.45	33.68	3.44	25.86	215	0.21
92	10.06	33.75	2.98	203	100	9.86	33.77	2.82	26.04	198	0.27
112	9.57	33.80	2.62	191	150	9.01	33.93	2.25	26.30	173	0.36
130	9.28	33.86	2.46	183	200	8.45	34.08	1.78	26.50	154	0.44
149	9.02	33.93	2.26	174	250	8.19	34.14	1.25	26.60	145	0.52
178	8.76	34.05	2.07	160	300	7.60	34.17	1.01	26.70	135	0.59
211	8.33	34.09	1.60	151	400	6.73	34.24	0.58	26.88	118	0.72
240	8.26	34.14	1.29	146	500	6.12	34.28	0.32	26.99	107	0.84
288	7.72	34.16	1.09	137	600	(5.67)	(34.34)	(0.36)	(27.10)	(97)	(0.95)
340	7.23	34.22	0.80	126							
424	6.56	34.25	0.50	115							
508	6.08	34.29	0.30	106							
593	5.70	34.34	0.35	98							
ORCA; May 8, 1959; 0028, 0115 GCT; 32°34.5'N, 119°37'W; sounding, 510 fm; wind, 310°, force 2; weather, clear; sea, rough; wire angle, 22°, 31°.											90.55
1	16.36	33.53	5.65	339	0	(16.36)	(33.53)	(5.65)	(24.56)	(339)	(0.00)
10	15.52	33.53	5.70	321	10	15.52	33.53	5.70	24.75	321	0.03
29	15.44	33.53	5.75	319	20	15.47	33.53	5.72	24.76	320	0.06
57	15.01	33.53	5.65	310	30	15.43	33.53	5.75	24.77	319	0.10
66	14.52	33.50	5.55	302	50	15.25	33.53	5.71	24.81	315	0.16
78	12.50	33.42	4.93	269	75	13.50	33.46	5.30	25.12	285	0.24
93	11.04	33.37	4.23	247	100	10.78	33.47	4.00	25.64	236	0.30
106	10.64	33.55	3.88	227	150	9.41	33.79	3.24	26.12	190	0.41
129	9.92	33.71	3.49	203	200	8.65	34.00	2.33	26.42	163	0.50
147	9.44	33.78	3.29	191	250	8.07	34.11	1.72	26.58	146	0.58
174	9.26	33.86	2.93	182	300	7.61	34.16	1.37	26.70	136	0.65
201	8.62	34.00	2.32	162	400	6.85	34.21	0.76	26.84	122	0.78
					500	6.21	34.28	0.42	26.98	108	0.91
224	8.23	34.06	1.89	152							
269	7.92	34.14	1.59	141							
319	7.39	34.18	1.17	131							
399	6.86	34.21	0.77	122							
482	6.32	34.27	0.42	110							
566	5.82	34.31	0.35	102							
ORCA; May 8, 1959; 0520 GCT; 32°24.5'N, 119°57.5'W; sounding, 500 fm; wind, 310°, force 2; weather, partly cloudy; sea, rough; wire angle, 04°.											90.60
1	15.84	33.55	5.67	326	0	(15.84)	(33.55)	(5.67)	(24.69)	(326)	(0.00)
11	15.74	33.55	5.61	324	10	15.75	33.55	5.62	24.72	324	0.03
30	15.56	33.57	5.59	319	20	15.60	33.57	5.58	24.76	320	0.06
60	13.73	33.33	5.67	299	30	15.56	33.57	5.59	24.77	319	0.10
71	13.06	33.30	5.37	289	50	15.30	33.54	5.60	24.81	315	0.16
85	11.50	33.39	4.74	254	75	12.33	33.33	5.08	25.25	273	0.23
101	10.85	33.49	4.36	235	100	10.88	33.48	4.38	25.64	236	0.30
115	10.10	33.56	4.07	218	150	9.24	33.73	3.48	26.10	192	0.41
140	9.44	33.68	3.67	198	200	8.39	33.92	2.56	26.40	164	0.50
160	9.03	33.77	3.28	185	250	7.81	34.02	1.91	26.56	149	0.58
190	8.56	33.89	2.75	169	300	7.50	34.13	1.29	26.69	137	0.65
220	8.06	33.99	2.15	155	400	6.56	34.18	0.77	26.86	120	0.78
250	7.81	34.02	1.91	149	500	6.08	34.23	0.43	26.96	110	0.90
299	7.51	34.13	1.30	137	600	5.48	34.32	0.27	27.10	97	1.01
355	6.86	34.16	0.93	126							
440	6.36	34.20	0.61	116							
526	5.96	34.25	0.37	108							
613	5.37	34.33	0.26	94							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

90.70 ORCA; May 8, 1959; 1141 GCT; 32°04'N, 120°38.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 10°.

2	15.17	33.46	5.62	318	0	(15.17)	(33.46)	(5.62)	(24.78)	(318)	(0.00)
12	15.17	33.48	6.13u	317	10	15.17	33.48		24.79	317	0.03
32	14.98	33.48	5.62	314	20	15.09	33.48		24.81	315	0.06
61	14.96	33.46	5.48	314	30	14.99	33.48	(5.62)	24.82	314	0.09
71	14.77	33.59	5.57	300	50	14.97	33.47	5.55	24.82	314	0.16
86	13.28	33.42	5.16	284	75	14.60	33.57	5.56	24.98	299	0.23
102	11.71	33.38	4.69	258	100	11.90	33.38	4.72	25.38	261	0.30
117	10.14	33.46	4.34	226	150	9.34	33.80	3.00	26.15	188	0.42
141	9.58	33.73	3.17	196	200	8.59	33.98	2.35	26.41	163	0.51
160	9.09	33.86	2.89	180	250	7.84	34.05	1.72	26.58	147	0.59
190	8.76	33.95	2.50	167	300	7.32	34.10	1.28	26.70	136	0.66
220	8.07	34.05	1.84	151	400	6.52	34.19	0.75	26.88	119	0.79
249	7.84	34.05	1.72a)	147	500	5.94	34.26	0.39	27.00	106	0.91
299	7.33	34.10	1.29	136	600	5.46	34.32	0.35	27.10	97	1.02
353	6.91	34.16	1.04	126							
438	6.23	34.22	0.54	114							
524	5.82	34.28	0.38	104							
610	5.40	34.32	0.35	96							

90.80 ORCA; May 8, 1959; 1816 GCT; 31°43'N, 121°19'W; sounding, 2000 fm; wind, 260°, force 3; weather, overcast; sea, moderate; wire angle, 10°.

1	16.18	33.55	5.48	333	0	(16.18)	(33.55)	(5.48)	(24.62)	(333)	(0.00)
11	16.16	33.53	5.50	334	10	16.16	33.53	5.50	24.60	334	0.03
31	16.16	33.53	5.57	334	20	16.16	33.53	5.52	24.60	334	0.07
60	16.02	33.53	5.54	332	30	16.16	33.53	5.56	24.60	334	0.10
70	15.18	33.40	5.59	324	50	16.05	33.53	5.55	24.63	332	0.17
86	14.38	33.30	5.65	314	75	15.10	33.39	5.60	24.74	322	0.25
100	13.50	33.32	5.95	296	100	13.50	33.32	5.95	25.02	296	0.33
116	12.24	33.37	5.18	268	150	10.12	33.56	4.40	25.83	218	0.46
140	10.62	33.52	4.58	229	200	8.91	33.77	3.80	26.19	184	0.56
160	9.70	33.60	4.27	208	250	8.19	33.92	2.79	26.42	162	0.65
190	9.08	33.73	4.03	189	300	7.41	34.04	2.00	26.63	142	0.73
219	8.62	33.84	3.32	174	400	6.37	34.16	0.98	26.86	120	0.86
249	8.20	33.92	2.81	162	500	5.78	34.22	0.65	26.99	108	0.98
298	7.44	34.04	2.03	143	600	5.22	34.30	0.50	27.12	96	1.09
354	6.74	34.12	1.31	127							
438	6.12	34.18	0.76	115							
523	5.64	34.24	0.61	105							
608	5.19	34.31	0.48	94							

90.90 ORCA; May 9, 1959; 0018 GCT; 31°25'N, 121°59'W; sounding, 2000+ fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 17°.

1	15.80	33.49	5.71	330	0	(15.80)	(33.49)	(5.71)	(24.65)	(330)	(0.00)
11	15.78	33.51	5.67	328	10	15.78	33.51	5.67	24.68	328	0.03
30	15.68	33.51	5.67	326	20	15.72	33.51	5.67	24.69	326	0.06
58	15.66	33.48	5.67	328	30	15.68	33.51	5.67	24.70	326	0.10
68	15.55	33.48	5.74	325	50	15.67	33.50	5.67	24.69	326	0.16
82	14.96	33.40	5.73	319	75	15.25	33.44	5.74	24.74	322	0.24
96	14.49	33.37	5.80	311	100	14.28	33.36	5.80	24.89	307	0.32
111	12.89	33.35	5.62	282	150	9.98	33.56	4.62	25.86	216	0.46
139	10.72	33.45	4.76	236	200	8.53	33.85	3.43	26.32	172	0.56
154	9.68	33.60	4.56	208	250	8.09	33.99	2.52	26.50	155	0.64
182	8.75	33.72	3.88	184	300	7.40	34.03	1.92	26.62	142	0.72
211	8.44	33.91	3.20	166	400	6.39	34.16	1.10	26.87	119	0.85
240	8.22	33.98	2.67	158	500	5.78	34.20	0.70	26.98	109	0.97
287	7.53	34.02	2.00	145	600	(5.26)	(34.30)	(0.34)	(27.12)	(96)	(1.08)
342	7.00	34.07	1.66	134							
423	6.20	34.18	0.96	116							
508	5.73	34.20	0.67	109							
592	5.30	34.29	0.36	97							

a) Alternate value, 1.94 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; May 9, 1959; 0430 GCT; 30°44.5'N, 123°20'W; sounding, 2000+ fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 11°. 90.110

1	16.31	33.52	5.35	338	0	(16.31)	(33.52)	(5.35)	(24.56)	(338)	(0.00)
10	16.29	33.53	5.27	337	10	16.29	33.53	5.27	24.58	337	0.03
27	16.30	33.54	5.23	337	20	16.30	33.53	5.27	24.58	337	0.07
54	16.16	33.60	5.30	329	30	16.30	33.55	5.23	24.59	336	0.10
63	15.94	33.59	5.28	325	50	16.23	33.59	5.27	24.64	332	0.17
76	15.60	33.48	5.31	326	75	15.61	33.48	5.30	24.69	326	0.25
89	15.62	33.55	5.35	321	100	16.20	33.77	5.34	24.78	318	0.33
103	15.69	33.70	5.32	312	150	10.92	33.58	4.65	25.71	229	0.47
125	13.17	33.49	5.21	276	200	8.98	33.72	3.80	26.14	188	0.58
142	11.52	33.58	4.79	240	250	8.09	33.95	2.56	26.46	158	0.67
168	9.54	33.57	4.31	208	300	7.42	34.02	1.94	26.62	144	0.75
195	9.05	33.69	3.91	192	400	6.44	34.15	0.87	26.85	121	0.88
221	8.57	33.88	3.05	170	500	5.66	34.26	0.50	27.04	103	1.00
264	7.89	33.98	2.38	153							
314	7.25	34.04	1.76	140							
389	6.52	34.14	0.93	123							
464	5.88	34.23	0.60	109							
541	5.54	34.31	0.40	98							

BLACK DOUGLAS; May 9, 1959; 1710 GCT; 30°04.5'N, 124°40'W; sounding, 2400 fm; wind, 360°, force 4; weather, cloudy; sea, rough; wire angle, 14°. 90.130

1	16.51	33.57	5.42	339	0	(16.51)	(33.57)	(5.42)	(24.56)	(339)	(0.00)
9	16.51	33.63	5.40	335	10	16.51	33.63	5.40	24.60	335	0.03
27	16.52	33.62	5.42	336	20	16.52	33.62	5.41	24.60	335	0.07
53	15.96	33.57	5.45	327	30	16.52	33.62	5.43	24.59	336	0.10
61	15.96	33.60	5.41	325	50	16.00	33.56	5.45	24.66	328	0.17
74	16.96	33.96	5.38	321	75	16.96	33.96	5.38	24.75	321	0.25
87	16.97	33.99	5.39	319	100	16.70	33.99	5.40	24.83	313	0.33
101	16.40	33.95	5.40	309	150	11.57	33.54	4.71	25.56	244	0.47
122	13.68	33.56	5.29	282	200	9.55	33.74	4.22	26.07	195	0.58
139	12.24	33.55	4.87	255	250	8.48	33.91	3.19	26.38	166	0.67
166	10.73	33.55	4.53	228	300	7.59	33.99	2.54	26.56	148	0.76
192	9.76	33.71	4.36	201	400	6.59	34.11	1.03	26.80	126	0.90
219	9.12	33.80	3.86	184	500	5.74	34.20	0.53	26.98	109	1.02
262	8.22	33.95	2.97	160							
310	7.43	34.00	2.44	145							
385	6.74	34.10	1.16	129							
460	5.96	34.16	0.66	114							
538	5.63	34.25	0.41	104							

BLACK DOUGLAS; May 10, 1959; 0030 GCT; 29°34.5'N, 125°40'W; sounding, 2400 fm; wind, 360°, force 5; weather, cloudy; sea, rough; wire angle, 15°. 90.145

2	17.14	33.76	5.34	339	0	(17.14)	(33.76)	(5.34)	(24.55)	(339)	(0.00)
11	17.12	33.74	5.37	340	10	17.12	33.74	5.36	24.54	340	0.03
33	17.10	33.78	5.33	337	20	17.12	33.74	5.37	24.54	340	0.07
60	16.76	34.00	5.32	314	30	17.11	33.76	5.35	24.56	338	0.10
69	16.94	34.14	5.26	307	50	17.04	33.92	5.33	24.70	326	0.17
87	16.34	34.13	5.38	294	75	17.00	34.21	5.29	24.93	304	0.25
100	15.12	33.95	5.29	282	100	15.12	33.95	5.29	25.16	282	0.32
113	13.77	33.75	5.11	269	150	11.89	33.72	4.73	25.64	236	0.45
139	11.97	33.63	4.73	244	200	9.89	33.76	4.43	26.02	200	0.56
157	11.82	33.77	4.73	231	250	8.68	33.85	3.72	26.29	174	0.66
183	10.63	33.76	4.65	212	300	7.75	33.97	3.33	26.52	152	0.74
213	9.40	33.77	4.23	191	400	6.67	34.10	1.64	26.78	128	0.89
240	8.88	33.82	3.85	179	500	5.68	34.16	0.76	26.96	111	1.01
283	8.08	33.95	3.35	158							
340	7.06	34.00	3.30	140							
427	6.49	34.13	1.05	123							
507	5.62	34.17	0.74	110							
574	5.32	34.23	0.50	102							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

93.28 BLACK DOUGLAS; May 7, 1959; 0427 GCT;[a] 32°55'N, 117°22'W; sounding, 324 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 03°.

204	9.13	34.26	1.02	150
213	9.12	34.29	0.92	148
221	8.88	34.31	0.91	143
230	8.78	34.30	0.89	142
239	8.72	34.26	0.81	144
248	8.63	34.30	0.80	140
257	8.60	34.29	0.76	140
266	8.62	34.29	0.74	140
275	8.54	34.30	0.77	138
284	8.36	34.32	0.80	134
292b)	8.45	34.32	0.68	136

93.28 ORCA; May 11, 1959; 0147 GCT; 32°54.5'N, 117°22'W; sounding, 324 fm; wind, 200°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

0	18.07	33.63	5.76	370	0	18.07	33.63	5.76	24.23	370	0.00
10	16.70	33.61	6.14	341	10	16.70	33.61	6.14	24.54	341	0.04
30	12.33	33.58	4.24	254	20	15.00	33.59	5.51	24.90	306	0.07
40	11.58	33.64	3.61	237	30	12.33	33.58	4.24	25.44	254	0.10
50	11.06	33.68	3.14	225	50	11.06	33.68	3.61	25.76	225	0.14
60	10.70	33.73	3.17	215	75	10.26	33.76	3.01	25.97	205	0.20
71	10.34	33.78	3.01	206	100	9.76	33.83	2.82	26.10	192	0.25
86	10.08	33.76	2.94	201	150	9.48	34.04	2.00	26.32	172	0.34
101	9.74	33.84	2.77	191	200	8.94	34.14	1.62	26.48	156	0.42
116	9.66	33.87	2.22	188	250	8.78	34.22	1.22	26.57	148	0.50
141	9.52	34.03	2.03	174	300	8.44	34.27	0.96	26.66	140	0.58
171	9.36	34.06	1.93	169	400	7.29	34.25	0.72	26.81	125	0.71
206	8.90	34.16	1.57	154	500	6.45	34.30	0.47	26.97	110	0.83
257	8.74	34.23	1.13	146							
306	8.38	34.27	0.93	138							
412	7.17	34.25	0.69	123							
512	6.35	34.31	0.42	108							

93.30 ORCA; May 10, 1959; 2341 GCT; 32°50'N, 117°31.5'W; sounding, 450 fm; wind, 310°, force 1; weather, partly cloudy; sea, slight; wire angle, 06°.

1	18.27	33.62	5.54	376	0	(18.27)	(33.62)	(5.54)	(24.17)	(376)	(0.00)
11	17.40	33.58	5.73	358	10	17.47	33.58	5.72	24.34	360	0.04
31	15.02	33.58	5.93	307	20	16.20	33.58	5.88	24.64	332	0.07
41	13.27	33.52	5.00	276	30	15.15	33.58	5.93	24.87	309	0.10
51	11.93	33.58	3.90	247	50	12.10	33.57	4.04	25.48	251	0.16
67	11.08	33.71	3.21	223	75	10.70	33.76	3.10	25.88	213	0.22
81	10.40	33.77	3.04	207	100	10.00	33.78	2.96	26.02	200	0.27
101	9.94	33.78	2.96	198	150	9.59	34.14	1.68	26.38	166	0.36
126	9.53	33.95	2.39	180	200	8.74	34.14	1.63	26.51	154	0.44
146	9.62	34.14	1.68	167	250	8.44	34.23	1.20	26.62	142	0.52
175	9.06	34.14	1.70	158	300	8.19	34.26	0.96	26.69	136	0.59
205	8.69	34.14	1.60	152	400	7.39	34.28	0.78	26.83	123	0.72
235	8.49	34.22	1.33	144	500	6.53	34.31	0.44	26.96	110	0.85
275	8.40	34.25	1.05	140							
335	7.84	34.27	0.88	131							
411	7.30	34.29	0.74	122							
484	6.64	34.31	0.48	112							
567	6.08	34.31	0.35	105							

a) Test cast.

b) The last seven bottles of this cast were omitted because of pretripping which may have started at this depth.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m	
ORCA; May 10, 1959; 2055 GCT; 32°40'N, 117°52'W; sounding, 350 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 05°.												93.35
1	17.94	33.60	5.36	370	0	(17.94)	(33.60)	(5.36)	(24.24)	(370)	(0.00)	
11	17.68	33.61	5.78	363	10	17.72	33.61	5.75	24.30	364	0.04	
31	14.86	33.55	5.80	306	20	16.90	33.59	5.80	24.48	346	0.07	
41	13.22	33.52	4.84	276	30	15.25	33.56	5.80	24.83	313	0.10	
55	11.62	33.58	3.72	242	50	12.05	33.56	4.00	25.48	251	0.16	
70	10.94	33.66	3.49a)	224	75	10.78	33.68	3.39	25.81	220	0.22	
95	10.26	33.75	3.01	206	100	10.09	33.76	2.92	25.99	203	0.27	
115	9.86	33.85	2.65	192	150	9.73	34.07	1.88	26.29	174	0.37	
135	9.74	33.98	2.27	180	200	8.75	34.08	1.87	26.46	158	0.45	
155	9.72	34.09	1.80	172	250	8.16	34.14	1.59	26.60	145	0.53	
186	8.94	34.06	1.95	163	300	8.32	34.29	0.93	26.70	136	0.60	
220	8.49	34.11	1.71	152	400	6.96	34.22	0.75	26.83	123	0.74	
250	8.16	34.14	1.59	145	500	6.22	34.22	0.74	26.94	113	0.86	
300	8.32	34.29	0.93	136	600	5.75	34.31	0.53	27.06	101	0.97	
355	7.46	34.23	0.85	129								
437	6.64	34.22	0.69b)	118								
526	6.07	34.23	0.74	111								
611	5.71	34.33	0.47	99								
ORCA; May 10, 1959; 1735, 1752 GCT; 32°30'N, 118°12.5'W; sounding, 950 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 13°, 22°.												93.40
0	16.58	33.63	5.22	336	0	16.58	33.63	5.22	24.58	336	0.00	
10	16.57	33.62	5.47	337	10	16.57	33.62	5.47	24.57	337	0.03	
29	13.28	33.53	4.98	276	20	16.54	33.62	5.47	24.58	336	0.07	
39	12.67	33.54	4.86	264	30	13.15	33.53	4.95	25.25	273	0.10	
54	11.68	33.58	4.57	243	50	12.08	33.56	4.72	25.48	251	0.15	
68	10.82	33.65	3.36	223	75	10.74	33.66	3.30	25.80	221	0.21	
93	10.03	33.73	3.03	204	100	10.00	33.74	3.01	25.99	202	0.26	
112	9.78	33.86	2.56	190	150	9.08	34.06	2.03	26.39	165	0.36	
131	9.32	33.98	2.20	174	200	8.73	34.16	1.64	26.52	152	0.44	
149	9.10	34.05	2.04	166	250	8.43	34.23	1.14	26.63	142	0.51	
179	8.82	34.13	1.73	156	300	7.80	34.23	1.04	26.73	133	0.58	
					400	6.98	34.27	0.62	26.87	119	0.71	
211	8.69	34.18	1.57	150	500	6.22	34.29	0.41	26.99	108	0.83	
237	8.58	34.23	1.19	144	600	(5.70)	(34.33)		(27.09)	(98)	(0.94)	
285	7.92	34.22	1.11	135								
338	7.57	34.27	0.81	127								
420	6.80	34.27	0.57	117								
503	6.18	34.29	0.40	107								
586	5.72	34.33	0.33	99								

a) Alternate value, 3.74 ml/L, not used in interpolation.
b) Mean value of 0.61 and 0.77 ml/L.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
93.50	ORCA; May 10, 1959; 1101 GCT; 32°09.5'N, 118°54'W; sounding, 700 fm; wind, 250°, force 6; weather, cloudy; sea, very rough; wire angle, 20°.										
1	16.44	33.65	5.57	332	0	(16.44)	(33.65)	(5.57)	(24.63)	(332)	(0.00)
10	16.46	33.64	5.72	333	10	16.46	33.64	5.72	24.62	333	0.03
34	16.18	-	5.54		20	16.46	33.64	5.72	24.62	333	0.07
44	14.42	33.57	5.45	295	30	16.46	33.64	5.72	24.62	333	0.10
58	12.68	33.58	4.65	261	50	13.70	33.58	5.17	25.17	280	0.16
71	11.26	33.55	4.19	238	75	11.08	33.56	4.05	25.67	233	0.22
93	10.42	33.67	3.49	214	100	10.04	33.70		25.95	206	0.28
111	9.50	33.75	3.56u	194	150	9.03	33.93	2.33	26.30	174	0.38
130	9.15	33.87	2.66	180	200	8.34	34.08	1.69	26.52	152	0.46
158	8.98	33.96	2.23	170	250	7.93	34.14	1.32	26.63	142	0.53
185	8.50	34.06	1.82	156	300	7.51	34.18	1.05	26.73	132	0.60
221	8.16	34.11	1.51	147	400	6.73	34.27	0.72	26.90	116	0.73
249	7.94	34.14	1.33	142	500	6.22	34.31	0.51	27.00	107	0.85
295	7.55	34.18	1.06	133	600	5.69	34.31	0.31	27.07	100	0.96
357	7.04	34.23	0.74	123							
451	6.42	34.30	0.70	110							
539	6.06	34.31	0.35	105							
612	5.60	34.31	0.31	99							
93.60	ORCA; May 10, 1959; 0331 GCT; 31°50.5'N, 119°34'W; sounding, 2000+ fm; wind, 320°, force 7; weather, cloudy; sea, high; wire angle, 42°. a)										
3	15.70	33.55	5.66	323	0	(15.70)	(33.55)	(5.66)	(24.72)	(323)	(0.00)
10	15.71	33.55	5.72	323	10	15.71	33.55	5.72	24.72	323	0.03
31	15.70	33.54	5.68	324	20	15.71	33.55	5.72	24.72	323	0.06
54	15.62	-	-		30	15.70	33.54	5.68	24.71	324	0.10
63	14.60	33.48	5.67	306	50	15.65	33.53	5.68	24.72	323	0.16
79	12.61	33.33	5.26	278	75	13.02	33.35	5.34	25.13	284	0.24
91	11.90	33.46	5.03	256	100	11.41	33.53	4.39	25.58	241	0.30
103	11.24	33.55	4.23	237	150	9.70	33.73	3.45	26.04	198	0.42
127	10.38	33.64	3.84	216	200	8.83	33.98	2.44	26.36	167	0.51
142	9.90	33.69	3.60	205	250	8.21	34.06	1.73	26.53	151	0.59
166	9.35	33.82	3.20	186	300	7.57	34.14	1.30	26.68	137	0.66
192	8.92	33.95	2.48	170	400	6.77	34.23	0.64	26.86	120	0.80
215	8.68	34.02	2.39	162	500	6.28	34.31		27.00	107	0.92
254	8.14	34.07	1.64	150							
307	7.50	34.15	1.27	135							
394	6.80	34.22	0.67	120							
478	6.34	34.30	0.54	108							
551	6.14	34.34	-	103							
93.70	ORCA; May 9, 1959; 2037 GCT; 31°31'N, 120°14'W; sounding, 2000 fm; wind, 320°, force 7; weather, cloudy; sea, high; wire angle, 42°. a)										
2	15.76	33.50	5.48	328	0	(15.76)	(33.50)	(5.48)	(24.67)	(328)	(0.00)
10	15.76	33.52	5.69	326	10	15.76	33.52	5.69	24.69	326	0.03
30	15.74	33.48	5.93	329	20	15.75	33.50	5.86	24.67	328	0.06
54	15.20	33.42	5.69	322	30	15.74	33.48	5.93	24.66	329	0.10
62	14.52	33.40	5.77	310	50	15.70	33.47	5.90	24.66	329	0.16
78	13.20	33.37	5.52	286	75	13.32	33.38	5.56	25.10	288	0.24
90	12.13	33.35	-	268	100	11.58	33.35	5.01	25.41	258	0.31
101	11.44	33.35	4.97	256	150	9.22	33.67	3.75	26.06	196	0.42
126	9.74	33.48	4.57	218	200	8.52	33.92	3.10	26.38	166	0.52
143	9.37	33.63	3.94	201	250	7.75	34.08	2.42	26.61	144	0.60
165	8.91	33.78	3.30	183	300	7.30	34.20	1.71	26.76	129	0.67
192	8.64	33.89	3.29	171	400	6.57	34.18	0.76	26.86	120	0.80
217	8.22	33.96	2.79	159	500	5.93	34.24	0.54	26.99	108	0.92
254	7.70	34.09	2.35	142							
305	7.26	34.20	1.70	128							
389	6.64	34.18	0.84	122							
472	6.09	34.22	0.55	112							
545	5.70	34.29	0.54	102							

a) Depth determination indicates wire angle to be lower than recorded.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
ORCA; May 9, 1959; 1235 GCT; 31°10'N, 120°55'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 27°.											93.80
2	15.65	33.44	5.64	330	0	(15.65)	(33.44)	(5.64)	(24.65)	(330)	(0.00)
12	15.66	33.42	5.43	332	10	15.66	33.42	5.44	24.63	332	0.03
29	15.53	33.42	5.53	329	20	15.60	33.42	5.47	24.64	331	0.07
56	15.40	33.40	-	328	30	15.52	33.42	5.53	24.67	328	0.10
64	15.40	33.40	5.50	328	50	15.42	33.41	5.51	24.67	328	0.16
78	15.36	33.40	5.65	326	75	15.37	33.40	5.64	24.68	327	0.25
90	14.52	33.45	5.67	306	100	13.83	33.46	5.60	25.05	292	0.33
103	13.76	33.47	5.59	289	150	9.68	33.55	4.28	25.90	212	0.45
124	11.58	33.51	4.96	246	200	8.58	33.87	2.90	26.33	171	0.55
142	10.08	33.52	4.43	220	250	7.74	33.99	2.31	26.54	150	0.63
167	9.01	33.68	3.94	192	300	7.09	34.05	1.73	26.68	137	0.70
192	8.67	33.84	3.11	175	400	6.29	34.14	1.00	26.86	120	0.84
219	8.28	33.94	2.56	162	500	5.69	34.22	0.54	27.00	107	0.96
262	7.55	34.00	2.21	147							
312	6.98	34.06	1.64	134							
389	6.36	34.13	1.06	121							
468	5.84	34.20	0.62	110							
550	5.46	34.25	0.42	102							
ORCA; May 9, 1959; 0551 GCT; 30°50'N, 121°35'W; sounding, 2000+ fm; wind, 310°, force 5; weather, overcast; sea, rough; wire angle, 15°.											93.90
1	16.58	33.60	5.52	339	0	(16.58)	(33.60)	(5.52)	(24.56)	(339)	(0.00)
10	16.56	33.58	5.48	339	10	16.56	33.58	5.48	24.56	339	0.03
30	16.56	33.60	5.48	338	20	16.56	33.59	5.48	24.56	339	0.07
59	16.52	33.60	5.48	337	30	16.56	33.60	5.48	24.57	338	0.10
70	15.88	33.54	5.62	328	50	16.54	33.60	5.48	24.57	338	0.17
83	16.56	33.86	5.52	319	75	16.25	33.72	5.57	24.73	322	0.25
97	16.23	33.89	5.50	310	100	16.00	33.87	5.48	24.90	306	0.33
113	14.94	33.79	5.35	290	150	10.70	33.52	4.67	25.70	230	0.47
137	12.10	33.51	5.00	256	200	8.96	33.75	3.59	26.17	186	0.58
156	10.28	33.53	4.52	223	250	8.23	33.92	3.00	26.41	163	0.66
185	9.19	33.70	3.76	193	300	7.49	34.02	2.07	26.60	145	0.74
214	8.79	33.81	3.44	178	400	6.61	34.12	1.15	26.80	126	0.88
243	8.34	33.90	3.10	166	500	5.83	34.21	0.55	26.97	109	1.01
291	7.60	34.00	2.19	148	600	(5.34)	(34.26)	(0.35)	(27.08)	(99)	(1.12)
346	7.09	34.07	1.64	136							
428	6.36	34.14	0.88	121							
511	5.78	34.22	0.50	108							
594	5.38	34.26	0.36	100							
PAOLINA-T; May 7, 1959; 0005 GCT;[a] 32°11'N, 117°16.5'W; sounding, 830 fm; wind, 300°, force 2; weather, cloudy; sea, rough; wire angle, 16°.											97.32
416	7.20	34.46u	0.66								
426	7.12	34.29	0.37	119							
436	6.94	34.31	0.19	116							
446	6.82	34.30	0.21	115							
455	6.77	34.40u	0.00u								
465	6.70	34.27	0.00u	116							
475	6.73	34.31	0.00u	113							
485	6.59	34.32	0.23	110							
495	6.52	34.32	0.14	109							
505	6.50	34.31	0.20	110							
514	6.38	34.33	0.25	107							
524	6.33	34.34	0.50	105							
534	6.24	34.33	0.40	105							
544	6.18	34.32	0.38	105							
554	6.14	34.34	0.40	103							
564	6.06	34.34	0.40	102							
574	6.00	34.34	0.48	102							
583	5.96	34.34	0.48	101							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10 cm/g	ΔD dyn. m
97.60	ORCA; May 12, 1959; 1647 GCT; 31°15'N, 119°11.5'W; sounding, 1950 fm; wind, 170°, force 1; weather, cloudy; sea, slight; wire angle, 04°.										
0	16.45	33.60	5.65	336	0	16.45	33.60	5.65	24.59	336	0.00
10	16.35	33.60	5.39	334	10	16.35	33.60	5.39	24.61	334	0.03
30	16.16	33.58	5.51a)	331	20	16.25	33.59	5.45	24.62	332	0.07
56	14.54	33.40	5.58	310	30	16.16	33.58	5.51	24.64	331	0.10
65	13.45	33.35	5.33	292	50	16.10	33.57	5.54	24.65	330	0.17
76	12.64	33.52	4.53	264	75	12.70	33.51	4.56	25.32	266	0.24
91	11.84	33.57	4.17	246	100	11.24	33.59	4.03	25.65	235	0.30
105	10.90	33.60	3.94	228	150	9.54	33.78	3.06	26.09	193	0.41
131	10.00	33.73	3.43	204	200	8.93	33.96	2.41	26.34	170	0.50
151	9.52	33.78	3.05	192	250	8.24	34.12	1.78	26.57	148	0.58
176	9.18	33.89	2.71	179	300	7.60	33.17	1.25	26.70	135	0.66
206	8.86	33.98	2.32	167	400	6.80	33.22	0.80	26.86	120	0.79
235	8.48	34.11	1.90	152	500	6.04	33.32	0.42	27.03	104	0.91
275	7.86	34.14	1.50	140							
336	7.34	34.20	0.98	129							
411	6.70	34.23	0.76	118							
486	6.12	34.31	0.42	106							
567	5.66	34.32	0.41	99							
100.60	ORCA; May 26, 1959; 1000 GCT; 30°40.5'N, 118°47'W; sounding, 1550 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.										
1	16.68	33.62	5.44	340	0	(16.68)	(33.62)	(5.44)	(24.54)	(340)	(0.00)
11	16.69	33.62	5.44	340	10	16.69	33.62	5.44	24.54	340	0.03
30	16.69	33.61	5.44	340	20	16.69	33.62	5.44	24.54	340	0.07
60	14.54	33.40	5.58	310	30	16.69	33.61	5.44	24.54	340	0.10
70	13.46	33.31	5.53	296	50	16.00	33.54	5.51	24.65	330	0.17
84	12.32	33.35	5.01	271	75	13.09	33.31	5.44	25.09	288	0.25
99	11.86	33.40	4.60	260	100	11.85	33.40	4.59	25.40	259	0.32
115	11.40	33.53	4.16	242	150	10.03	33.68	3.38	25.93	208	0.43
140	10.38	33.64	3.55	216	200	8.57	33.95	2.48	26.39	165	0.53
160	9.70	33.75	3.14	197	250	8.03	34.09	1.72	26.58	147	0.61
189	8.72	33.91	2.62	170	300	7.61	34.13	1.32	26.67	138	0.68
219	8.35	34.00	2.21	158	400	6.80	34.20	0.74	26.84	122	0.82
248	8.06	34.09	1.73	147	500	6.04	34.26	0.46	26.98	108	0.94
298	7.62	34.13	1.33	138	600	5.52	34.29	0.30	27.07	100	1.05
353	7.20	34.18	1.00	129							
438	6.45	34.21	0.54	117							
523	5.92	34.27	0.41	106							
608	5.48	34.29	0.29	99							
100.90	ORCA; May 14, 1959; 0710 GCT; 29°40.5'N, 120°47.5'W; sounding, 2000+ fm; wind, 310°, force 2; weather, partly cloudy; sea, slight; wire angle, 15°.										
1	16.94	33.58	5.31	348	0	(16.94)	(33.58)	(5.31)	(24.46)	(348)	(0.00)
11	16.94	33.58	5.39	348	10	16.94	33.58	5.39	24.46	348	0.03
30	16.68	33.58	5.39	343	20	16.81	33.58	5.39	24.49	346	0.07
58	16.58	33.58	5.44	340	30	16.68	33.58	5.39	24.51	343	0.10
68	16.29	33.59	5.48	333	50	16.61	33.58	5.43	24.54	341	0.17
82	15.56	33.60	5.50	316	75	15.90	33.60	5.50	24.72	324	0.26
95	14.17	33.62	5.28	286	100	13.60	33.59	5.18	25.20	278	0.33
110	12.69	33.53	4.97	264	150	10.04	33.58	4.15	25.86	216	0.46
133	10.92	33.51	4.53	235	200	8.84	33.81	3.03	26.23	180	0.56
153	9.92	33.60	4.05	212	250	8.09	34.00	2.31	26.50	154	0.64
182	9.18	33.73	3.47	190	300	7.38	34.06	1.94	26.66	140	0.72
210	8.64	33.88	2.65	172	400	6.42	34.12	0.96	26.83	123	0.86
239	8.24	33.98	2.38	158	500	5.81	34.23	0.50	27.00	107	0.98
286	7.53	34.05	2.05	143	600	(5.38)	(34.32)	(0.40)	(27.11)	(96)	(1.08)
339	7.04	34.10	1.52	133							
422	6.22	34.14	0.81	119							
505	5.78	34.24	0.49	106							
590	5.41	34.31	0.40	97							

a) Alternate value, 5.70 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m
ORCA; May 16, 1959; 1950, 2035 GCT; 30°10'N, 118°25'W; sounding, 1800 fm; wind, 300°, force 2; weather, overcast; sea, rough; wire angle, 18°, 21°.											103.60
1	16.81	33.66	5.43	340	0	(16.81)	(33.66)	(5.43)	(24.55)	(340)	(0.00)
10	16.74	33.66	5.36	338	10	16.74	33.66	5.36	24.57	338	0.03
29	16.72	33.64	5.42	339	20	16.73	33.65	5.39	24.56	338	0.07
57	15.98	33.56	5.46	328	30	16.72	33.64	5.42	24.57	339	0.10
67	14.78	33.48	5.51	310	50	16.70	33.63	5.43	24.56	338	0.17
81	13.44	33.40	5.31	288	75	14.03	33.43	5.43	24.99	298	0.25
95	12.24	33.47	4.99	260	100	11.84	33.50	4.91	25.48	252	0.32
110	11.28	33.53	4.79	240	150	9.68	33.65	3.98	25.98	204	0.44
133	10.32	33.57	4.31	220	200	8.62	33.87	3.03	26.32	172	0.53
152	9.60	33.66	3.93	202	250	7.89	34.01	2.20	26.54	150	0.61
180	8.84	33.81	3.23	180	300	7.33	34.09	1.79	26.68	138	0.69
208	8.52	33.90	2.93	168	400	6.48	34.18	1.00	26.86	120	0.82
237	8.04	33.98	2.38	155	500	6.03	34.32	0.52	27.03	104	0.94
284	7.50	34.07	1.91	141	600	(5.40)	(34.35)		(27.14)	(94)	(1.04)
336	7.00	34.12	1.50	130							
419	6.34	34.20	0.84	116							
501	6.02	34.32	0.52	104							
585	5.50	34.35	0.36	95							
ORCA; May 18, 1959; 1459 GCT; 29°31.5'N, 118°00.5'W; sounding, 1800 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 19°.											107.60
1	17.51	33.88	5.41	339	0	(17.51)	(33.88)	(5.41)	(24.56)	(339)	(0.00)
10	17.50	33.87	5.29	340	10	17.50	33.87	5.29	24.55	340	0.03
30	17.53	33.87	5.30	340	20	17.50	33.87	5.30	24.55	340	0.07
58	17.52	33.91	5.36	337	30	17.53	33.87	5.30	24.55	340	0.10
69	17.52	33.88	5.27	339	50	17.52	33.90	5.34	24.57	338	0.17
83	17.10	33.83	5.32	334	75	17.52	33.87	5.28	24.57	338	0.25
97	16.07	33.77	5.18	315	100	15.25	33.70	4.99	24.94	302	0.34
111	14.78	33.67	4.88	295	150	11.57	33.64	4.19	25.63	236	0.47
136	12.44	33.64	4.38	252	200	9.79	33.86	2.92	26.12	190	0.58
154	11.34	33.64	4.11	232	250	8.72	34.04	2.36	26.43	161	0.67
183	9.89	33.71	3.48	203	300	8.20	34.14	1.67	26.59	146	0.75
212	9.69	33.96	2.53	182	400	6.80	34.16	1.08	26.80	125	0.89
242	8.84	34.02	2.44	164	500	6.02	34.23	0.52	26.96	110	1.02
291	8.31	34.13	1.76	148	600	(5.40)	(34.29)	(0.38)	(27.09)	(98)	(1.13)
345	7.55	34.14	1.34	137							
428	6.50	34.17	0.95	120							
513	5.96	34.24	0.44	108							
598	5.41	34.29	0.38	99							
ORCA; May 20, 1959; 1556 GCT; 28°55.5'N, 117°39'W; sounding, 2000 fm; wind, 310°, force 2; weather, cloudy; sea, very rough; wire angle, 18°.											110.60
2	17.51	33.81	5.42	344	0	(17.51)	(33.81)	(5.42)	(24.50)	(344)	(0.00)
11	17.50	33.82	5.34	343	10	17.50	33.82	5.35	24.51	343	0.03
31	17.53	33.81	5.32	345	20	17.52	33.82	5.33	24.50	344	0.07
60	17.48	33.83	5.36	342	30	17.53	33.81	5.32	24.49	345	0.10
69	17.48	33.83	5.32	342	50	17.49	33.82	5.35	24.50	344	0.17
83	17.00	33.78	5.41	335	75	17.20	33.80	5.38	24.57	338	0.26
98	16.46	33.75	5.38	325	100	16.28	33.74	5.37	24.74	322	0.34
112	14.83	33.59	5.17	302	150	11.58	33.64	3.78	25.64	236	0.48
136	12.60	33.61	4.26	257	200	9.80	33.92	2.76	26.17	186	0.59
155	11.22	33.66	3.61	229	250	9.47	34.20	1.69	26.44	160	0.68
185	10.21	33.86	2.96	198	300	8.05	34.12	1.80	26.60	145	0.76
214	9.48	33.98	2.54	177	400	7.34	34.25	0.77	26.80	126	0.90
243	9.55	34.18	1.68	163	500	6.68	34.31	0.56	26.94	112	1.02
291	8.14	34.11	1.86	147	600	(5.99)	(34.32)	(0.39)	(27.04)	(103)	(1.14)
344	7.74	34.19	1.28	135							
428	7.12	34.27	0.62	121							
512	6.60	34.31	0.53	111							
596	6.01	34.32	0.40	104							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

110.90 ORCA; May 21, 1959; 1425 GCT; 28°00'N, 119°38'W; sounding, 2000+ fm; wind, 330°, force 3; weather, partly cloudy; sea, very rough; wire angle, 10°.

1	18.05	33.95	5.29	347	0	(18.05)	(33.95)	(5.29)	(24.48)	(347)	(0.00)
11	18.08	33.93	5.27	349	10	18.08	33.93	5.27	24.45	349	0.03
31	18.07	33.93	5.27a)	349	20	18.08	33.93	5.27	24.45	349	0.07
61	18.07	33.94	5.24	348	30	18.07	33.93	5.27	24.45	349	0.10
70	17.96	34.02	5.36	340	50	18.07	33.94	5.25	24.46	348	0.17
85	17.00	33.90	5.41	326	75	17.60	33.98	5.40	24.60	334	0.26
101	15.34	33.73	4.94	302	100	15.45	33.74	4.99	24.92	304	0.34
115	14.12	33.79	4.81	273	150	11.40	33.67	4.07	25.69	231	0.47
140	11.88	33.64	4.07	242	200	9.64	33.86	3.17	26.15	188	0.58
160	10.96	33.71	4.07	220	250	9.08	34.13	2.11	26.45	159	0.67
190	9.75	33.78	3.55	196	300	8.62	34.26	1.47	26.62	143	0.75
219	9.47	34.02	2.46	174	400	7.42	34.31	0.72	26.84	122	0.89
249	9.09	34.13	2.12	160	500	6.64	34.34	0.42	26.95	110	1.01
300	8.62	34.26	1.47	143	600	5.87	34.37	0.30	27.09	98	1.12
355	7.88	34.26	1.08	132							
439	7.16	34.34	0.52	116							
524	6.42	34.34	0.38	107							
609	5.82	34.37	0.29	97							

113.60 ORCA; May 22, 1959; 1331 GCT; 28°20'N, 117°17.5'W; sounding, 1900 fm; wind, 310°, force 2; weather, cloudy; sea, rough; wire angle, 05°.

1	17.50	33.80	5.34	345	0	(17.50)	(33.80)	(5.34)	(24.50)	(345)	(0.00)
11	17.52	33.77	5.36	347	10	17.51	33.77	5.36	24.47	347	0.03
30	17.53	33.77	5.29	347	20	17.52	33.77	5.33	24.47	347	0.07
60	17.36	33.78	5.33	343	30	17.53	33.77	5.29	24.47	347	0.10
71	17.25	33.77	5.53	341	50	17.44	33.77	5.30	24.49	345	0.17
86	16.22	33.73	5.49	321	75	16.65	33.75	5.52	24.66	330	0.26
100	14.56	33.62	5.29	294	100	14.56	33.62	5.29	25.02	294	0.34
115	12.76	33.61	4.86	260	150	10.49	33.71	3.99	25.88	213	0.46
140	10.88	33.65	4.42	224	200	10.59	34.21	1.70	26.26	177	0.56
160	10.32	33.78	3.56	205	250	10.00	34.33	1.20	26.45	159	0.65
190	10.50	34.14	2.04	181	300	9.67	34.43	0.79	26.58	146	0.73
220	10.64	34.31	1.21	171	400	8.20	34.37	0.60	26.77	128	0.87
250	10.00	34.33	1.20	159	500	7.37	34.41	0.40	26.93	113	1.00
301	9.66	34.43	0.79	146	600	6.10	34.35	0.34	27.05	102	1.11
356	8.53	34.33	0.82	136							
441	7.92	34.41	0.40	121							
526	7.06	34.41	0.40	110							
611	5.96	34.34	0.33	101							

117.50 ORCA; May 24, 1959; 0839 GCT; 28°08'N, 116°15'W; sounding, 2500 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 08°.

0	17.68	33.76	5.22	352	0	17.68	33.76	5.22	24.42	352	0.00
10	17.68	33.75	5.29	352	10	17.68	33.75	5.29	24.42	352	0.04
30	17.50	33.73	5.35	350	20	17.61	33.74	5.33	24.42	352	0.07
59	16.56	33.77	5.38	326	30	17.50	33.73	5.35	24.44	350	0.10
69	16.08	33.75	5.36	317	50	17.25	33.74	5.37	24.51	344	0.17
84	15.06	33.66	5.27	302	75	15.75	33.72	5.34	24.84	312	0.26
99	13.63	33.70	4.82	270	100	13.55	33.70	4.80	25.30	269	0.33
114	12.14	33.62	4.40	248	150	10.70	33.90	2.70	26.00	202	0.45
140	10.60	33.67	3.96	218	200	9.99	34.16	1.72	26.32	171	0.54
160	10.83	34.05	2.12	194	250	9.44	34.28	1.29	26.50	154	0.63
190	10.06	34.14	1.79	175	300	8.39	34.23	1.21	26.63	142	0.70
220	9.93	34.23	1.56	165	400	8.10	34.40	0.45	26.82	124	0.84
249	9.46	34.28	1.29	154	500	6.75	34.35	0.30	26.96	111	0.96
299	8.39	34.23	1.21	142	600	6.00	34.34	0.27	27.06	102	1.08
354	8.54	34.42	0.53	130							
438	7.60	34.38	0.39	120							
523	6.51	34.34	0.29	108							
609	5.96	34.34	0.26	101							

a) Mean value of 5.20 and 5.34 ml/L.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

PAOLINA-T; May 17, 1959; 0700 GCT; 27°29'N, 115°44'W; sounding, 2450 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 10°. 120.50

2	18.11	33.71	5.47	365	0	(18.11)	(33.71)	(5.47)	(24.28)	(365)	(0.00)	
12	18.11	33.71	5.26	365	10	18.11	33.71	5.26	24.28	365	0.04	
31	17.99	33.76	5.25	359	20	18.07	33.73	5.25	24.31	362	0.07	
41	17.02	33.70	5.37	342	30	18.00	33.76	5.25	24.34	359	0.11	
56	16.51	33.70	5.34	330	50	16.72	33.70	5.34	24.61	334	0.18	
71	15.02	33.58	5.62	307	75	14.68	33.58	5.58	24.97	300	0.26	
96	12.80	33.60	4.82	262	100	12.65	33.61	4.70	25.40	258	0.33	
115	11.76	33.69	3.56	236	150	9.98	33.73	3.41	25.99	202	0.44	
135	10.72	33.69	3.61	218	200	9.81	34.15	1.61	26.34	170	0.54	
155	9.84	33.77	3.29	198	250	9.09	34.22	1.44	26.52	153	0.62	
184	9.84	34.04	2.00	178	300	8.22	34.20	1.36	26.64	142	0.70	
219	9.66	34.22	1.45	162	400	7.01	34.24	0.72	26.84	122	0.84	
248	9.12	34.22	1.44	153	500	6.21	34.32	0.45	27.01	106	0.95	
298	8.24	34.20	1.37	142	600	5.69	34.43	0.35	27.16	91	1.06	
353	7.36	34.21	0.99	128								
437	6.76	34.27	0.56	116								
521	6.06	34.34	0.42	102								
606	5.66	34.43	0.34	91								

PAOLINA-T; May 11, 1959; 1530 GCT; 26°05'N, 114°08.5'W; sounding, 1200 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 09°. 130.40

2	17.38	33.72	5.42	347	0	(17.38)	(33.72)	(5.42)	(24.47)	(347)	(0.00)	
12	17.30	33.73	5.08	345	10	17.32	33.73	5.15	24.48	346	0.03	
31	16.92	33.72	5.18	338	20	17.10	33.73	5.12	24.54	341	0.07	
56	16.69	33.72	5.22	332	30	16.94	33.72	5.16	24.57	338	0.10	
66	16.48	33.73	5.14	327	50	16.81	33.72	5.20	24.60	335	0.17	
76	16.06	33.74	5.14	317	75	16.09	33.74	5.14	24.78	318	0.25	
91	13.90	33.73	4.30	273	100	12.80	33.71	3.97	25.45	254	0.32	
106	12.30	33.70	3.80	245	150	11.08	34.09	1.99	26.07	195	0.43	
131	11.25	34.00	2.44	204	200	10.72	34.38	0.90	26.36	167	0.52	
150	11.08	34.09	1.99	195	250	10.04	34.48	0.65	26.56	149	0.61	
175	11.04	34.29	1.22	180	300	9.47	34.48	0.52	26.66	139	0.68	
205	10.62	34.40	0.84	164	400	8.37	34.49	0.39	26.84	122	0.82	
234	10.25	34.48	0.67	152	500	7.23	34.42	0.33	26.95	112	0.94	
274	9.72	34.47	0.64	144								
333	9.17	34.50	0.34	133								
408	8.27	34.48	0.39	122								
482	7.42	34.42	-	114								
561	6.60	34.42	0.28	103								

PAOLINA-T; May 9, 1959; 2055 GCT; 25°00'N, 113°23.5'W; sounding, 1300 fm; wind, 280°, force 5; weather, cloudy; sea, very rough; wire angle, 17°. 137.40

2	17.84	33.78	5.19	354	0	(17.84)	(33.78)	(5.19)	(24.40)	(354)	(0.00)	
11	17.74	33.77	4.99	352	10	17.75	33.77	4.99	24.41	353	0.04	
30	17.42	33.76	5.07	346	20	17.47	33.76	5.07	24.47	347	0.07	
59	15.25	33.68	4.64	304	30	17.42	33.76	5.07	24.48	346	0.10	
68	14.03	33.68	4.03	280	50	17.33	33.76	5.07	24.50	344	0.17	
83	13.30	33.73	3.58	261	75	13.71	33.69	3.84	25.26	272	0.25	
97	12.83	33.91	2.56	240	100	12.72	33.92	2.51	25.63	236	0.32	
111	12.02	33.93	2.43	224	150	12.19	34.54	0.52	26.22	180	0.42	
135	11.88	34.33	1.12	191	200	11.29	34.65	0.20	26.47	157	0.51	
155	12.26	34.61	0.36	178	250	10.13	34.55	0.43	26.60	145	0.58	
182	11.56	34.63	0.28	163	300	9.69	34.56	0.19	26.68	137	0.66	
212	11.11	34.65	0.18	154	400	8.07	34.45	0.24	26.85	121	0.79	
240	10.26	34.55	0.47	147	500	7.09	34.46	0.22	27.00	107	0.91	
287	9.84	34.57	0.19	139	600	(6.11)	(34.44)		(27.12)	(96)	(1.02)	
340	9.15	34.52	0.26	131								
421	7.78	34.43	0.24	118								
503	7.06	34.46	0.22	106								
587	6.26	34.44	0.20	97								

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
60.52-B	V-25	1225	37°53.5'	123°02.0'	44	340°	4	overcast	rough	10.75	33.76
60.55-B	25	1040	37°47.5'	123°15.0'	60	300°	4	overcast	rough	11.20	33.63
60.65-B	25	0515	37°28.0'	123°54.5'	1960	320°	4	overcast	moderate	12.51	33.35
60.70-B	25	0305	37°19.0'	124°16.0'	2150	320°	4	overcast	moderate	12.27	33.09
60.75-B	25	0100	37°09.0'	124°39.0'	2150	320°	4	overcast	slight	11.99	32.90
60.80-B	24	2240	36°57.5'	125°04.0'	2200	330°	1	overcast	moderate	13.08	32.75
60.85-B	24	2000	36°47.0'	125°25.0'	2200	310°	1	cloudy	moderate	12.47	32.66
63.52-B	23	1815	37°19.0'	122°36.0'	48	090°	4	cloudy	slight	11.34	33.69
63.55-B	23	2008	37°14.0'	122°49.5'	150	090°	3	cloudy	rough	11.56	33.78
63.60-B	23	2315	37°02.5'	123°11.5'	1350	140°	2	cloudy	rough	12.14	33.44
63.65-B	24	0150	36°53.0'	123°32.0'	1900	150°	1	clear	rough	12.64	33.44
63.70-B	24	0400	36°43.0'	123°55.5'	2100	180°	1	cloudy	rough	12.26	32.94
63.75-B	24	0610	36°33.0'	124°17.0'	2150	180°	1	cloudy	slight	12.92	32.94
63.85-B	24	1100	36°13.0'	124°59.0'	2400	250°	2	overcast	moderate	13.44	32.99
63.90-B	24	1315	36°03.0'	125°21.0'	2400	290°	2	drizzle	rough	13.80	32.85
67.50-B	21	0930	36°49.0'	122°04.5'	57	310°	3	partly cloudy	rough	10.09	33.85
67.55-B	21	1140	36°39.0'	122°26.0'	1100	300°	4	clear	very rough	11.84	33.62
67.60-B	21	1430	36°29.0'	122°47.5'	1600	330°	5	cloudy	very rough	12.48	33.64
67.65-B	21	1700	36°19.0'	123°09.0'	1750	320°	6	cloudy	high	12.49	33.66

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
67.70-B	V-21	1920	36°08.0'	123°30.0'	1750	320°	6	partly cloudy	very high	12.72	33.28
67.75-B	21	2220	35°58.0'	123°51.0'	2100	340°	7	partly cloudy	very high	13.82	33.30
67.80-B	22	0215	35°48.0'	124°13.0'	2200	340°	8	cloudy	very high	12.88	33.46
70.52-B	20	2030	36°08.5'	121°50.0'	350	320°	7	partly cloudy	high	9.48	33.89
70.55-B	20	2225	36°03.0'	122°02.0'	700	310°	6	clear	high	13.03	33.59
70.60-B	21	0030	35°53.0'	122°23.0'	1650	320°	7	partly cloudy	high	12.96	33.53
70.75-B	19	0600	35°24.0'	123°27.5'	2100	330°	7	partly cloudy	very rough	14.54	33.28
70.80-B	19	0325	35°19.0'	123°48.0'	2200	350°	7	partly cloudy	very rough	14.32	33.22
70.85-B	19	0020	35°03.0'	124°09.0'	2300	350°	6	partly cloudy	rough	14.43	33.22
73.51-B	17	1745	35°35.5'	121°20.0'	160	300°	3	partly cloudy	rough	11.16	33.58
73.55-B	17	1940	35°27.5'	121°37.5'	550	300°	4	cloudy	rough	12.80	33.46
73.60-B	17	2225	35°18.0'	121°58.5'	1300	320°	5	overcast	rough	13.94	33.42
73.65-B	18	0055	35°08.5'	122°18.5'	2100	320°	6	partly cloudy	very rough	14.08	33.30
73.75-B	18	0730	34°45.5'	123°07.0'	2250	340°	6	partly cloudy	very rough	14.68	33.30
73.80-B	18	1020	34°33.5'	123°27.5'	2100	320°	6	partly cloudy	very rough	15.04	33.33
73.85-B	18	1300	34°21.0'	123°59.0'	2250	330°	5	partly cloudy	rough	14.24	33.06
73.90-B	18	1520	34°10.5'	124°21.0'	2300	340°	6	partly cloudy	rough	14.08	33.04
77.50-B	16	1715	35°04.5'	120°52.0'	70	320°	6	clear	high	11.45	33.58
77.60-B	14	2255	34°44.0'	121°34.0'	480	330°	7	clear	very rough	13.68	33.45

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
77.65-B	V-14	1915	34°34.0'	121°55.0'	2000	360°	7	partly cloudy	rough	13.85	33.42
77.75-B	14	1245	34°14.0'	122°36.0'	2100	320°	3	overcast	moderate	14.47	33.42
77.80-B	14	1020	34°04.0'	122°57.0'	2200	320°	5	overcast	moderate	15.07	33.24
77.85-B	14	0803	33°54.0'	123°18.0'	2300	270°	5	cloudy	rough	15.19	33.33
77.90-B	14	0545	33°44.0'	123°39.0'	2000+	270°	3	cloudy	moderate	14.81	33.33
80.52-B	13	0625	34°24.5'	120°36.0'	117	140°	3	overcast	slight	13.62	33.68
80.55-B	13	0810	34°19.0'	120°48.0'	400	140°	2	overcast	slight	12.85	33.57
80.65-B	13	1345	33°59.0'	121°30.0'	1850	calm		overcast	slight	14.56	33.46
80.70-B	13	1438	33°50.0'	121°52.0'	2100	180°	1	overcast	slight	14.38	33.55
80.75-B	13	1810	33°40.0'	122°12.0'	2100	220°	2	partly cloudy	moderate	14.64	33.40
80.85-B	13	2315	33°19.0'	122°53.0'	2400	270°	3	clear	moderate	14.72	33.37
80.90-B	14	0130	33°09.0'	123°13.0'	2400	270°	3	clear	moderate	15.56	33.32
80.110-B	11	0930	32°29.0'	124°34.5'	2400	330°	4	partly cloudy	very rough	15.39	33.37
80.130-B	10	2250	31°49.0'	125°56.0'	2400	330°	5	cloudy	rough	16.18	33.56
82.47-B	13	0245	34°15.0'	119°58.0'	305	calm		overcast	slight	14.10	33.66
83.40-B	12	2330	34°14.0'	119°22.0'	12	calm		overcast	smooth	15.24	33.61
83.43-B	12	2155	34°08.0'	119°34.0'	135	120°	1	overcast	slight	14.05	33.59
83.51-B	12	1650	33°52.0'	120°08.5'	50	100°	3	overcast	slight	14.28	33.60
83.55-B	12	1515	33°44.0'	120°24.5'	530	100°	2	overcast	moderate	14.04	33.51

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
83.65-B	V-12	0910	33°22.0'	121°04.5'	2000	160°	3	overcast	moderate	14.87	33.44
83.70-B	12	0640	33°14.0'	121°26.5'	2100	090°	3	overcast	moderate	14.72	33.37
83.75-B	12	0430	33°04.0'	121°46.5'	2200	090°	3	overcast	rough	13.98	33.43
83.80-B	12	0210	32°54.0'	122°07.0'	2200	320°	2	cloudy	rough	14.84	33.46
83.85-B	11	2355	32°44.0'	122°27.5'	2200	320°	1	cloudy	rough	14.58	33.46
83.90-B	11	2140	32°34.0'	122°47.5'	2100	340°	1	cloudy	rough	14.76	33.39
87.35-B	7	1320	33°50.0'	118°37.5'	350	270°	1	partly cloudy	slight	15.45	33.57
87.40-B	7	1545	33°40.0'	118°58.5'	470	270°	1	partly cloudy	moderate	15.97	33.60
87.45-B	7	1820	33°30.0'	119°19.0'	900	240°	1	clear	moderate	14.63	33.60
87.50-B	7	2034	33°20.0'	119°39.5'	40	270°	1	clear	moderate	14.18	33.64
87.55-B	7	2310	33°10.0'	120°00.5'	680	310°	3	clear	rough	14.38	33.58
87.65-B	8	0510	32°50.0'	120°41.5'	2000	270°	3	clear	rough	14.00	33.53
87.70-B	8	0755	32°39.5'	121°03.0'	2000	270°	3	overcast	rough	14.94	33.39
87.75-B	8	1040	32°29.0'	121°25.5'	2000+	320°	3	overcast	rough	14.88	33.39
87.80-B	8	1315	32°19.0'	121°47.5'	2200	320°	4	overcast	rough	15.04	33.40
87.85-B	8	1550	32°09.0'	122°09.5'	2150	320°	3	overcast	rough	15.40	33.42
87.90-B	8	1815	31°59.0'	122°32.0'	2200	320°	3	overcast	rough	15.36	33.40
90.50-O	7	2130	32°44.5'	119°16.5'	58	320°	1	clear	moderate	15.42	33.63
90.65-O	8	0830	32°14.5'	120°17.5'	2050	300°	2	cloudy	rough	15.24	33.46

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
90.75-O	V-8	1450	31°54.0'	120°58.5'	2240	320°	3	overcast	moderate	15.80	33.48
90.85-O	8	2105	31°34.5'	121°39.0'	2200	310°	3	overcast	moderate	16.38	33.58
90.100-B	8	2340	31°04.5'	122°40.0'	2500	340°	4	overcast	moderate	16.02	33.48
90.120-B	9	1236	30°24.5'	124°00.5'	2000+	320°	4	partly cloudy	moderate	16.56	33.55
93.45-O	10	1425	32°20.0'	118°33.0'	600	320°	3	cloudy	very rough	16.74	33.68
93.55-O	10	0715	32°00.0'	119°14.0'	850	320°	6	partly cloudy	high	14.98	33.56
93.60-O	12	2140	31°50.5'	119°34.0'	1220	260°	1	cloudy	slight	15.78	33.57
93.65-O	13	0030	31°40.0'	119°54.5'	2000	260°	1	cloudy	slight	15.97	33.58
93.70-O	13	0300	31°31.0'	120°14.0'	2000+	270°	1	cloudy	moderate	15.60	33.46
93.75-O	9	1630	31°20.0'	120°35.0'	2000	320°	5	cloudy	very rough	15.44	33.46
93.75-O	13	0600	31°20.0'	120°35.0'	2000+	240°	1	rain	slight	15.60	33.44
93.85-O	9	0910	31°00.0'	121°15.0'	2000+	310°	5	overcast	very rough	16.04	33.53
97.30-O	11	2300	32°15.0'	117°08.5'	36	250°	1	cloudy	slight	17.86	33.64
97.32-O	12	0030	32°11.5'	117°16.5'	700	250°	1	cloudy	slight	16.94	33.61
97.35-O	12	0210	32°05.5'	117°28.5'	670	250°	1	cloudy	slight	16.76	33.66
97.40-O	12	0500	31°55.0'	117°50.0'	300	-	-	clear	slight	17.02	33.64
97.45-O	12	0805	31°45.0'	118°10.0'	800	-	-	clear	slight	16.85	33.67
97.50-O	12	1050	31°35.0'	118°30.5'	1300	110°	1	cloudy	slight	15.64	33.48
97.55-O	12	1340	31°25.0'	118°50.0'	245	200°	1	cloudy	slight	16.04	33.59

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
97.65-O	V-13	1245	31°04.0'	119°29.0'	1800	270°	1	cloudy	slight	16.00	33.51
97.70-O	13	1530	30°54.0'	119°50.0'	2000+	280°	1	cloudy	slight	15.96	33.49
97.75-O	13	1830	30°44.0'	120°10.0'	2000+	280°	1	partly cloudy	slight	16.28	33.55
97.80-O	13	2115	30°35.0'	120°29.0'	2000+	280°	1	partly cloudy	slight	16.12	33.51
97.85-O	13	2330	30°24.5'	120°50.5'	2000+	300°	2	partly cloudy	slight	16.14	33.52
97.90-O	14	0215	30°14.0'	121°09.0'	2000+	300°	2	partly cloudy	slight	16.40	33.51
100.29-O	15	2215	31°42.0'	116°43.5'	87	270°	2	partly cloudy	rough	14.03	33.59
100.30-O	15	2115	31°40.5'	116°46.5'	250	320°	2	partly cloudy	rough	16.22	33.62
100.35-O	15	1900	31°31.5'	117°06.0'	600	320°	2	overcast	rough	17.10	33.64
100.40-O	15	1555	31°21.5'	117°25.5'	850	310°	4	overcast	rough	16.26	33.62
100.45-O	15	1250	31°10.5'	117°46.0'	1100	330°	6	overcast	rough	16.02	33.58
100.50-O	26	1615	31°00.0'	118°07.0'	1250	320°	5	overcast	rough	17.01	33.65
100.55-O	26	1320	30°50.0'	118°27.0'	1400	320°	4	overcast	rough	17.02	33.62
100.65-O	14	2230	30°28.0'	119°07.0'	2000+	330°	6	partly cloudy	rough	16.78	33.65
100.70-O	14	1945	30°21.0'	119°29.0'	2000	320°	3	cloudy	rough	16.48	33.58
100.75-O	14	1630	30°11.0'	119°48.0'	2000	320°	3	cloudy	moderate	16.36	33.50
100.80-O	14	1330	30°01.0'	120°07.5'	2000	320°	2	cloudy	moderate	16.74	33.56
100.85-O	14	1030	29°50.0'	120°28.0'	2000+	320°	5	partly cloudy	moderate	17.63	33.82
103.30-O	16	0300	31°05.0'	116°25.0'	39	calm		cloudy	rough	15.03	33.60

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TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
103.35-O	V-16	0530	30°55.0'	116°45.0'	1000	310°	1	cloudy	rough	16.08	33.61
103.40-O	16	0805	30°45.0'	117°05.5'	1040	320°	1	overcast	rough	17.12	33.62
103.45-O	16	1100	30°35.5'	117°25.0'	1200	320°	1	overcast	rough	16.95	33.64
103.50-O	16	1345	30°26.0'	117°45.0'	1250	320°	1	cloudy	rough	16.86	33.60
103.55-O	16	1630	30°16.0'	118°05.0'	1200	300°	1	overcast	rough	16.81	33.67
103.65-O	17	0020	29°56.0'	118°45.0'	1700	300°	5	overcast	very rough	17.00	33.68
103.70-O	17	0320	29°43.5'	119°05.5'	1800	300°	4	cloudy	very rough	16.54	33.53
103.75-O	17	0605	29°34.0'	119°26.0'	1800	290°	4	cloudy	very rough	17.47	33.84
103.80-O	17	0900	29°25.0'	119°46.0'	1860	300°	2	cloudy	very rough	17.50	33.84
103.85-O	17	1200	29°15.0'	120°06.0'	2000+	350°	2	cloudy	very rough	17.57	33.86
103.90-O	17	1445	29°05.5'	120°26.0'	2000+	350°	3	cloudy	very rough	17.73	33.87
107.32-O	19	0745	30°26.0'	116°11.0'	350	320°	3	cloudy	rough	17.76	33.71
107.35-O	19	0600	30°20.0'	116°23.0'	1000	320°	3	cloudy	very rough	17.72	33.70
107.40-O	19	0345	30°10.5'	116°32.5'	500	320°	3	partly cloudy	very rough	17.60	33.71
107.45-O	19	0045	30°01.0'	116°58.0'	1250	320°	5	partly cloudy	very rough	17.21	33.66
107.50-O	18	2145	29°51.5'	117°20.0'	1800	330°	5	partly cloudy	very rough	17.13	33.68
107.55-O	18	1820	29°39.0'	117°42.5'	1800	340°	5	partly cloudy	very rough	17.65	33.87
107.65-O	18	1115	29°21.0'	118°22.0'	2000+	330°	4	cloudy	very rough	17.75	33.88
107.70-O	18	0805	29°10.0'	118°43.0'	2000+	340°	4	cloudy	very rough	17.72	33.86

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
107.75-O	V-18	0500	29°01.5'	119°01.0'	2000+	340°	4	cloudy	very rough	17.30	33.91
107.80-O	18	0215	28°51.5'	119°20.0'	2000+	340°	5	cloudy	very rough	17.80	33.86
107.85-O	17	2310	28°42.0'	119°39.5'	2000+	340°	5	overcast	very rough	17.90	33.89
107.90-O	17	1945	28°30.0'	120°03.0'	2000+	350°	4	partly cloudy	very rough	17.86	33.85
110.33-O	20	0015	29°50.0'	115°52.0'	48	280°	2	overcast	rough	16.69	33.64
110.35-O	20	0130	29°46.0'	116°00.0'	700	290°	2	overcast	rough	17.64	33.68
110.40-O	20	0435	29°36.0'	116°19.5'	1000	290°	2	cloudy	rough	17.06	33.61
110.45-O	20	0730	29°26.0'	116°40.0'	550	300°	2	cloudy	rough	17.36	33.72
110.50-O	20	1000	29°16.0'	116°59.0'	1950	300°	2	cloudy	rough	17.60	33.86
110.55-O	20	1300	29°05.5'	117°19.0'	1100	210°	2	cloudy	very rough	17.49	33.80
110.65-O	20	1910	28°45.0'	117°58.5'	2000	300°	3	partly cloudy	very rough	17.85	33.86
110.70-O	21	0240	28°36.0'	118°19.0'	1750	320°	5	cloudy	high	17.66	33.82
110.75-O	21	0525	28°27.0'	118°37.5'	2000	320°	5	cloudy	high	17.65	33.80
110.80-O	21	0820	28°18.0'	118°58.0'	2050	320°	5	overcast	high	17.76	33.83
110.85-O	21	1110	28°08.0'	119°17.0'	2000+	320°	4	cloudy	high	17.65	33.86
113.30-O	23	0830	29°22.5'	115°17.5'	36	320°	2	cloudy	moderate	16.22	33.61
113.35-O	23	0500	29°12.0'	115°39.0'	600	320°	2	cloudy	moderate	16.82	33.65
113.40-O	23	0135	28°58.5'	116°02.0'	1040	320°	2	cloudy	moderate	16.92	33.64
113.45-O	22	2250	28°50.0'	116°20.0'	1000	320°	2	cloudy	moderate	17.20	33.65

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
113.50-O	V-22	1930	28°39.5'	116°40.5'	2000	330°	1	overcast	rough	17.72	33.86
113.55-O	22	1640	28°30.0'	116°59.0'	1900	310°	2	cloudy	rough	17.71	33.82
113.65-O	22	0940	28°10.0'	117°36.0'	1000	310°	2	cloudy	rough	17.80	33.78
113.70-O	22	0650	28°00.0'	117°54.0'	1850	300°	2	cloudy	rough	17.88	33.74
113.75-O	22	0400	27°49.5'	118°13.0'	2000+	320°	2	cloudy	very rough	17.90	33.77
113.80-O	22	0130	27°40.5'	118°33.0'	2000+	310°	2	cloudy	very rough	18.66	34.05
113.85-O	21	2230	27°31.0'	118°52.5'	2000+	320°	2	partly cloudy	very rough	18.70	34.05
113.90-O	21	1925	27°28.5'	119°17.0'	2000+	310°	3	partly cloudy	very rough	18.56	34.05
117.26-O	23	1330	28°56.0'	114°41.0'	41	310°	2	cloudy	moderate	16.88	33.69
117.35-O	23	1740	28°38.0'	115°16.0'	120	310°	2	cloudy	moderate	17.22	33.69
117.40-O	24	0115	28°28.0'	115°35.5'	300	300°	2	partly cloudy	slight	17.58	33.71
117.45-O	24	0415	28°18.0'	115°55.0'	1700	300°	3	partly cloudy	moderate	17.88	33.69
117.55-O	24	1145	27°57.0'	116°33.0'	2400	300°	3	overcast	moderate	18.01	33.68
117.60-O	24	1430	27°46.5'	116°53.5'	2100	300°	3	overcast	moderate	18.15	33.69
117.65-O	24	1715	27°36.0'	117°15.0'	1800	310°	3	overcast	moderate	18.14	33.71
117.70-O	24	2015	27°25.0'	117°37.0'	2100	320°	2	cloudy	moderate	18.18	33.71
117.75-O	24	2155	27°17.0'	117°52.0'	2000+	310°	2	overcast	moderate	17.96	33.75
117.80-O	25	0030	27°06.0'	118°13.0'	2000+	310°	2	partly cloudy	moderate	18.70	34.04
117.85-O	25	0315	26°55.0'	118°34.5'	2100	310°	2	partly cloudy	moderate	18.82	34.04

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
117.90-O	V-25	0515	26°47.5'	118°49.5'	2300	310°	3	partly cloudy	moderate	18.78	34.04
118.39-O	23	2050	28°18.5'	115°23.0'	114	-	1	partly cloudy	slight	17.56	33.69
120.40-P	17	1235	27°56.5'	115°14.0'	40	-	1	cloudy	slight	17.76	33.77
120.45-P	17	0830	27°42.0'	115°40.5'	700	340°	5	cloudy	moderate	17.24	33.64
120.55-P	17	0130	27°17.0'	116°06.0'	2200	320°	4	cloudy	high	18.08	33.67
120.60-P	16	2228	27°06.5'	116°28.0'	2250	320°	4	cloudy	very rough	18.03	33.70
120.65-P	16	1905	26°54.0'	116°50.0'	2250	-	1	cloudy	very rough	18.17	33.75
120.70-P	16	1635	26°46.5'	117°07.0'	2300	320°	3	cloudy	very rough	18.74	33.99
120.75-P	16	1340	26°39.5'	117°26.0'	2250	340°	6	cloudy	very rough	18.77	34.02
120.80-P	16	1045	26°32.0'	117°48.5'	2380	340°	6	cloudy	very rough	18.90	34.16
120.85-P	16	0733	26°27.0'	118°11.0'	2400	340°	5	cloudy	very rough	19.06	34.13
120.90-P	16	0500	26°24.0'	118°28.0'	2400	300°	4	cloudy	rough	18.94	34.09
123.37-P	14	1810	27°24.0'	114°39.5'	42	240°	5	missing	rough	14.00	33.75
123.42-P	14	2135	27°15.0'	114°59.5'	870	320°	6	partly cloudy	high	17.62a)	33.68a)
123.45-P	15	0025	27°07.5'	115°11.0'	2350	320°	7	cloudy	high	18.14	33.69
123.50-P	15	0530	27°04.5'	115°34.5'	2300	320°	6	overcast	high	18.53	33.97
123.55-P	15	0840	26°49.5'	115°51.5'	2300+	320°	6	cloudy	very rough	18.60	33.97

a) Depth, 11 meters.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.60-P	V-15	1205	26°32.5'	116°07.0'	2280	320°	6	cloudy	very rough	18.88	34.05
123.65-P	15	1535	26°26.5'	116°30.0'	2200	320°	5	cloudy	very rough	18.62	34.02
123.70-P	15	1810	26°20.0'	116°53.0'	2350	320°	4	cloudy	very rough	18.58	33.93
127.34-P	13	1105	26°55.5'	114°06.0'	40	360°	2	partly cloudy	moderate	16.76	33.75
127.40-P	13	0735	26°43.0'	114°29.5'	1750	360°	4	partly cloudy	moderate	17.28a)	33.75
127.45-P	13	0435	26°33.0'	114°49.0'	2000	320°	4	partly cloudy	moderate	16.14	33.74
127.50-P	13	0124	26°26.5'	115°09.0'	2350	320°	2	cloudy	moderate	18.34	33.82
127.55-P	12	2218	26°22.0'	115°34.5'	2250	360°	2	cloudy	moderate	18.45	33.88
127.60-P	12	1911	26°23.5'	115°58.0'	2100	360°	2	cloudy	moderate	19.00	34.10
127.65-P	12	1600	26°10.0'	116°18.5'	2250	280°	3	cloudy	slight	18.84	34.00
127.70-P	12	1300	25°58.0'	116°35.5'	2350	270°	3	rain	moderate	19.27	34.25
130.30-P	11	0910	26°30.0'	113°29.5'	42	270°	3	missing	moderate	14.59	33.79
130.35-P	11	1235	26°19.0'	113°52.0'	450	320°	3	missing	slight	17.29	33.78
130.45-P	11	1910	25°53.0'	114°56.5'	2110	280°	1	overcast	moderate	18.07	33.78
130.50-P	11	2150	25°47.0'	114°43.0'	2200	300°	2	cloudy	rough	18.27	33.84
130.55-P	12	0105	25°35.0'	115°04.0'	2250	320°	4	cloudy	rough	19.40	34.18
130.60-P	12	0413	25°30.0'	115°24.0'	2200	320°	4	partly cloudy	rough	19.48	34.23

a) Alternate value, 17.41°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
133.25-P	V-11	0218	26°04.5'	112°44.5'	45	270°	4	missing	rough	16.16	33.92
133.30-P	10	2318	25°52.0'	113°06.5'	110	320°	5	missing	very rough	17.62	33.85
133.35-P	10	2025	25°40.0'	113°23.5'	350	320°	5	missing	very rough	17.90	33.84
133.40-P	10	1735	25°28.5'	113°44.0'	1910	320°	6	cloudy	high	17.80	33.78
133.45-P	10	1435	25°18.5'	114°04.0'	1900	320°	6	cloudy	high	17.92	33.86
133.50-P	10	1154	25°09.0'	114°22.5'	2000+	320°	5	cloudy	high	18.47	33.93
137.23-P	9	1035	25°34.0'	112°19.0'	40	-	-	missing	moderate	16.16	33.98
137.30-P	9	1425	25°19.5'	112°44.0'	130	280°	4	cloudy	rough	18.06	34.00
137.35-P	9	1743	25°07.5'	113°05.0'	650	280°	5	cloudy	very rough	18.95	33.89
137.45-P	10	0014	24°50.0'	113°42.5'	1900+	280°	5	missing	very rough	18.03	33.85
137.50-P	10	0315	24°41.0'	114°00.0'	2050	320°	5	missing	high	19.00	34.04

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

77.70 BLACK DOUGLAS; June 15, 1959; 0336 GCT; 34°24'N, 122°16'W; sounding, 2000+ fm; wind, 320°, force 7; weather, clear; sea, high; wire angle, 32°.

0	14.02	33.18	5.36	316	0	14.02	33.18	5.36	24.80	316	0.00
9	14.01	33.18	5.19	316	10	14.01	33.18	5.19	24.80	316	0.03
28	13.94	33.24	5.34	310	20	13.99	33.21	5.27	24.84	312	0.06
35	13.86	33.31	5.34	303	30	13.92	33.25	5.34	24.88	308	0.09
45	13.75	33.39	5.41	295	50	13.69	33.40	5.43	25.04	292	0.15
57	13.42	33.42	5.42	286	75	12.93	33.46	5.32	25.24	274	0.22
76	12.87	33.46	5.29	273	100	10.96	33.52	4.42	25.65	235	0.29
90	11.85	33.47	5.01	254	150	9.61	33.83	2.65	26.12	190	0.40
104	10.42	33.59	3.87	220	200	9.11	34.06	1.65	26.39	165	0.49
125	9.97	33.69	3.28	206	250	8.74	34.16	1.36	26.52	152	0.57
144	9.71	33.80	2.78	194	300	8.38	34.21	1.16	26.62	143	0.64
171	9.18	34.00	1.90	170	400	7.30	34.19	0.95	26.76	130	0.78
192	9.14	34.04	1.72	167	500	(5.97)	(34.22)		(26.96)	(110)	(0.91)
224	8.94	34.12	1.49	158							
267	8.62	34.18	1.29	149							
336	8.08	34.22	1.05	138							
403	7.28	34.19	0.93	129							
463	6.42	34.20	0.56	117							

80.60 BLACK DOUGLAS; June 13, 1959; 1037 GCT; 34°09'N, 121°09'W; sounding, 1250 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 20°.

1	13.00	33.77	6.24	253	0	(13.00)	(33.77)	(6.24)	(25.46)	(253)	(0.00)
8	12.99	33.73	6.24	255	10	12.97	33.73	6.20	25.44	255	0.02
30	12.08	33.66	4.85	244	20	12.80	33.71	5.82	25.46	253	0.05
37	11.17	33.61	3.99	232	30	12.08	33.66	4.85	25.55	244	0.08
51	10.44	33.67	3.67	215	50	10.49	33.67	3.70	25.85	216	0.12
64	9.96	33.68	3.31	206	75	9.72	33.74	2.98	26.04	198	0.17
85	9.54	33.82	2.77	189	100	9.09	33.84	2.75	26.22	181	0.22
102	9.08	33.84	2.73	181	150	8.49	33.98	2.16	26.42	162	0.31
118	8.94	33.89	2.46	175	200	7.88	34.07	1.73	26.58	146	0.39
143	8.60	33.96	2.20	165	250	7.83	34.16	1.23	26.67	138	0.46
167	8.20	34.01	2.02	155	300	7.59	34.22	0.95	26.74	132	0.53
201	7.88	34.07	1.71	146	400	6.33	34.19	0.62	26.90	116	0.66
226	7.92	34.14	1.41	142	500	5.98	34.34	0.32	27.06	101	0.77
267	7.74	34.18	1.08	136							
322	7.46	34.23	0.89	129							
410	6.22a)	34.19	0.59	115							
491	6.00	34.34	0.31	102							
558	5.77	34.34	0.32	99							

80.90 BLACK DOUGLAS; June 14, 1959; 0145 GCT; 33°09'N, 123°13'W; sounding, 2400 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 07°.

1	14.44	33.33	5.82	313	0	(14.44)	(33.33)	(5.82)	(24.83)	(313)	(0.00)
9	14.46	33.37	5.80	311	10	14.46	33.37	5.80	24.85	311	0.03
32	14.34	33.37	5.85	308	20	14.44	33.37	5.81	24.86	310	0.06
41	14.09	33.37	5.75	304	30	14.37	33.37	5.84	24.87	309	0.09
54	13.50	33.42	5.75	288	50	13.57	33.41	5.75	25.07	290	0.15
68	12.72	33.50	5.50	267	75	12.48	33.52	5.41	25.37	262	0.22
89	11.93	33.58	5.06	247	100	10.40	33.48	4.40	25.72	228	0.28
108	9.84	33.48	4.13	220	150	9.00	33.71	4.35	26.13	189	0.39
126	9.22	33.60	4.02	201	200	8.37	33.94	3.60	26.42	162	0.48
153	8.97	33.74	4.41	186	250	7.75	34.00	2.66	26.55	149	0.56
179	8.66	33.89	4.41	171	300	7.32	34.09	1.57	26.68	137	0.63
214	8.16	33.96	3.16	158	400	6.49	34.17	0.84	26.86	120	0.76
242	7.82	33.99	2.82	152	500	5.76	34.26	0.38	27.02	105	0.88
286	7.46	34.07	1.73	140	600	(5.28)	(34.34)		(27.14)	(93)	(0.99)
343	6.93	34.13	1.28	129							
433	6.24	34.19	0.64	116							
513	5.68	34.27	0.35	103							
580	5.36	34.33	0.26	94							

a) Mean value of 6.19 and 6.26°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; June 12, 1959; 1226 GCT; 33°34'N, 120°45'W; sounding, 800 fm; wind, 280°, force 2; weather, overcast; sea, moderate; wire angle, 00°. 83.60

1	14.32	33.60	5.84	290	0	(14.32)	(33.60)	(5.84)	(25.07)	(290)	(0.00)
10	14.12	33.62	5.71	286	10	14.12	33.62	5.71	25.12	286	0.03
28	13.21	33.66	5.14	265	20	13.30	33.66	5.18	25.32	267	0.06
37	12.90	33.70	5.56	256	30	13.20	33.66	5.16	25.34	264	0.08
46	11.71	33.53	4.75	247	50	11.20	33.54	4.42	25.63	237	0.13
59	10.62	33.60	4.03	223	75	10.25	33.69	3.63	25.90	211	0.19
72	10.34	33.68	3.70	212	100	9.49	33.76	3.10	26.10	192	0.24
91	9.74	33.72	3.18	200	150	8.64	33.93	2.68	26.36	167	0.33
113	9.23	33.82	3.00	185	200	7.83	34.03	1.94	26.56	148	0.41
131	9.06	33.86	2.88	179	250	7.42	34.12	1.38	26.69	136	0.48
158	8.44	33.96	2.54	163	300	6.97	34.18	1.16	26.80	126	0.55
185	8.00	34.02	1.91	152	400	6.19	34.20	0.56	26.91	115	0.68
212	7.73	34.04	1.95	146	500	5.71	34.25	0.41	27.02	105	0.79
248	7.43	34.12	1.40	137							
302	6.94	34.18	1.13	125							
369	6.32a)	34.18	0.71	117							
436	6.06	34.22	0.49	112							
508	5.66	34.25	0.39	104							

BLACK DOUGLAS; June 11, 1959; 0150 GCT; 33°00'N, 120°21.5'W; sounding, 350 fm; wind, 320°, force 4; weather, clear; sea, high; wire angle, 22°. 87.60

2	13.96	33.56	5.82	287	0	(13.96)	(33.56)	(5.82)	(25.10)	(287)	(0.00)
11	13.92	33.57	5.46	285	10	13.93	33.57	5.46	25.12	285	0.03
27	13.60	33.58	5.49	278	20	13.73	33.58	5.48	25.16	281	0.06
52	13.40	33.61	5.43	272	30	13.57	33.58	5.48	25.21	277	0.08
61	13.09	33.58	5.17	268	50	13.42	33.61	5.43	25.25	273	0.14
73	12.10	33.64	4.64	246	75	11.55	33.64	4.40	25.64	236	0.20
85	10.90	33.64	4.00	225	100	10.06	33.60	3.61	25.87	214	0.26
98	10.12	33.60	3.63	215	150	8.56	33.90	2.58	26.36	168	0.36
118	8.95	33.78	3.03	184	200	8.09	34.00	2.13	26.50	154	0.44
135	8.76	33.85	2.90	175	250	7.55	34.02	1.65	26.60	145	0.51
159	8.46	33.92	2.50	166	300	7.11	34.11	1.10	26.72	133	0.58
183	8.32	33.96	2.38	160	400	6.53	34.21	0.61	26.88	118	0.71
208	7.98	34.01	2.01	152	500	6.10	34.29	0.32	27.00	107	0.83
249	7.58	34.02	1.68	146							
295	7.15	34.10	1.16	134							
366	6.68	34.18	0.76	122							
439	6.36	34.24	0.45	113							
513	6.04	34.30	0.30	105							

HORIZON; June 19, 1959; 2040 GCT; 33°28.5'N, 117°46.5'W; sounding, 200 fm; wind, 220°, force 2; weather, clear; sea, slight; wire angle, 00°. 90.28

1	21.24	33.71	5.48	443	0	(21.24)	(33.71)	(5.48)	(23.47)	(443)	(0.00)
11	16.50	33.62	5.83	335	10	16.80	33.62	5.83	24.52	342	0.04
31	12.66	33.58	4.06	260	20	13.60	33.58	4.66	25.20	278	0.07
51	11.54	33.62	3.24	237	30	12.68	33.58	4.08	25.38	261	0.10
76	10.30	33.71	3.19	210	50	11.59	33.62	3.26	25.62	238	0.15
101	9.82	33.83	2.59	193	75	10.32	33.71	3.19	25.91	210	0.20
125	9.56	34.00	2.10	176	100	9.85	33.82	2.63	26.08	194	0.25
163	9.06	34.06	2.00	164	150	9.08	34.02	2.03	26.36	168	0.34
202	9.04	34.18	1.42	155	200	9.04	34.17	1.49	26.48	156	0.43
250	8.88	34.23	1.17	149	250	8.88	34.23	1.17	26.56	149	0.50
299	8.55	34.29	1.03	139	300	(8.54)	(34.29)	(1.03)	(26.66)	(139)	(0.58)

a) Mean value of 6.28 and 6.36°C.

SIO
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5906

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.28	PAOLINA-T; June 25, 1959; 0705 GCT; 33°28.5'N, 117°46.5'W; sounding, 220+ fm; wind, 260°, force 3; weather, cloudy; sea, slight; wire angle, 03°.										
2	22.18	33.77	5.23	463	0	(22.18)	(33.77)	(5.23)	(23.26)	(463)	(0.00)
12	17.66	33.62	5.94	362	10	19.50	33.67	5.69	23.90	402	0.04
32	14.28	33.57	5.78	292	20	15.68	33.57	5.92	23.75	321	0.08
52	12.25	33.61	4.81	251	30	14.40	33.57	5.79	25.02	295	0.11
76	10.77	33.62	3.90	224	50	12.50	33.60	4.95	25.43	256	0.16
100	10.05	33.71	3.25	206	75	10.82	33.62	3.95	25.75	225	0.22
125	9.64	33.82	2.87	191	100	10.05	33.71	3.25	25.96	206	0.28
164	9.41	33.96	2.23	177	150	9.50	33.90	2.48	26.21	182	0.38
203	9.18	34.17	1.75	158	200	9.20	34.16	1.78	26.45	159	0.46
252	8.98	34.23	1.17	150	250	8.99	34.23	1.18	26.54	151	0.54
303	8.57	34.25	0.92	143	300	8.60	34.25	0.95	26.62	143	0.62
407	7.38	34.29	0.65	123	400	7.45	34.29	0.67	26.82	124	0.76
90.32	HORIZON; June 19, 1959; 1824 GCT; 33°22'N, 118°03.5'W; sounding, 460 fm; wind, direction missing, force 1; weather, fog; sea, slight; wire angle, 00°.										
1	20.86	34.33r	5.72		0	(20.86)	(33.71)	(5.72)	(23.57)	(433)	(0.00)
11	16.54	33.71	6.10	329	10	16.80	(33.71)	6.10	(24.59)	(336)	(0.04)
31	11.76	33.61	3.75	241	20	13.04	33.64	4.29	25.36	262	0.07
41	11.32	33.59	3.66	235	30	11.80	33.61	3.76	25.57	242	0.09
51	10.89	33.61	3.52	227	50	10.92	33.61	3.53	25.73	227	0.14
66	10.50	33.66	3.33	217	75	10.39	33.69	3.16	25.88	212	0.20
81	10.29	33.71	3.07	209	100	9.82	33.75	3.01	26.03	199	0.25
101	9.80	33.75	3.01	199	150	9.02	33.93	2.39	26.29	174	0.34
126	9.54	33.78	2.63	192	200	9.38	34.19	1.32	26.44	160	0.43
146	9.00	33.89	2.45	176	250	9.09	34.25	1.16	26.54	150	0.51
176	9.43	33.95r	1.50		300	8.74	34.27	1.05	26.61	144	0.58
205	9.36	34.20	1.29	158	400	7.42	34.27	0.74	26.81	125	0.72
234	9.16	34.24	1.20	152	500	6.35	34.29	0.40	26.97	109	0.84
273	8.94	34.26	1.10	147							
331	8.44	34.27	1.00	140							
405	7.36	34.27	0.70	124							
478	6.54	34.29	0.45	111							
557	5.90	34.29	0.29	104							
90.32	PAOLINA-T; June 25, 1959; 1041 GCT; 33°22.5'N, 117°59.5'W; sounding, 300 fm; wind, 260°, force 3; weather, overcast; sea, moderate; wire angle, 05°.										
1	21.46	33.77	5.25	444	0	(21.46)	(33.77)	(5.25)	(23.45)	(444)	(0.00)
11	20.36	33.73	5.68	418	10	20.68	33.74	5.57	23.65	426	0.04
31	14.06	33.57	5.72	288	20	16.08	33.60	5.79	24.68	328	0.08
41	13.08	33.57	4.99	269	30	14.12	33.57	5.74	25.08	289	0.11
51	12.22	33.60	4.14	251	50	12.29	33.60	4.20	25.47	252	0.17
61	11.38	33.60	3.80	236	75	10.96	33.66	3.56	25.76	224	0.22
71	11.10	33.64	3.73	228	100	9.66	33.71	3.54	26.02	200	0.28
86	10.47	33.69	3.16	214	150	9.10	33.94	2.48	26.30	174	0.37
101	9.62	33.72	3.54	198	200	8.72	34.12	1.82	26.50	154	0.46
115	9.42	33.84	3.18	186	250	8.39	34.21	1.29	26.62	143	0.53
140	9.23	33.91	2.60	178	300	8.14	34.31	0.92	26.73	132	0.60
170	8.82	34.01	2.30	164	400	7.16	34.29	0.76	26.86	120	0.73
204	8.70	34.13	1.78	154	500	6.46	34.31	0.49	26.97	110	0.85
255	8.35	34.22	1.26	142							
304	8.11	34.31	0.90	132							
409	7.08	34.29	0.74	119							
508	6.40	34.31	0.44	109							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T,3}^{-5}$ 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T,3}^{-5}$ 10 cm/g	ΔD dyn. m

HORIZON; June 19, 1959; 1507 GCT; 33°10.5'N, 118°23.5'W; sounding, 630 fm; wind, 240°, force 2; weather, overcast; sea, moderate; wire angle, 04°. 90.37

2	19.92	33.71	5.51	409	0	(19.92)	(33.71)	(5.51)	(23.82)	(409)	(0.00)
13	19.62	33.68	5.04	404	10	19.74	33.68	5.24	23.86	406	0.04
33	15.38	33.58	5.68	314	20	18.30	33.64	5.26	24.18	375	0.08
43	13.93	33.52	5.49	289	30	16.00	33.59	5.62	24.69	326	0.11
58	11.88	33.56	4.12	248	50	12.80	33.54	4.72	25.32	266	0.17
73	10.78	33.60	3.93	226	75	10.72	33.61	3.91	25.76	224	0.24
98	10.0 a)	33.69	3.22	207	100	10.0	33.70	3.16	25.96	206	0.29
118	9.34	33.86	2.71	183	150	8.85	33.98	2.16	26.36	167	0.38
137	9.02	33.95	2.41	172	200	8.41	34.11	1.86	26.53	151	0.46
158	8.76	34.00	2.01	164	250	7.86	34.16	1.35	26.66	139	0.54
187	8.51	34.08	1.92	154	300	7.57	34.21	1.12	26.74	131	0.61
221	8.20	34.13	1.65	146	400	6.88	34.31	0.57	26.91	115	0.74
250	7.86	34.16	1.35	139	500	6.18	34.32	0.38	27.02	105	0.85
297	7.58	34.21	1.13	132	600	5.71	34.33	0.32	27.08	99	0.96
352	7.28	34.29	0.66	122							
434	6.60	34.31	0.50	111							
517	6.08	34.33	0.35	103							
602	5.70	34.33	0.32	99							

PAOLINA-T; June 25, 1959; 1512 GCT; 33°10.5'N, 118°23.5'W; sounding, 645 fm; wind, 220°, force 2; weather, cloudy; sea, rough; wire angle, 02°. 90.37

2	20.34	33.74	5.40	418	0	(20.34)	(33.74)	(5.40)	(23.73)	(418)	(0.00)
12	19.94	33.71	5.65	409	10	19.95	33.70	5.64	23.81	410	0.04
32	15.16	33.59	6.07	309	20	18.24	33.66	5.89	24.21	372	0.08
42	13.04	33.55	4.98	270	30	15.99	33.61	6.05	24.70	325	0.12
52	11.86	33.58	4.19	246	50	11.89	33.58	4.21	25.52	247	0.17
67	10.52	33.65	3.56	218	75	10.27	33.72	3.39	25.93	208	0.23
82	10.09	33.75	3.29	203	100	9.62	33.82	2.94	26.11	191	0.28
101	9.60	33.82	2.93	191	150	9.30	34.06	1.98	26.36	167	0.37
126	9.42	33.93	2.54	180	200	9.01	34.15	1.70	26.47	157	0.45
145	9.32	34.05	2.02	169	250	8.84	34.25	1.18	26.58	147	0.53
175	9.09	34.11	1.87	161	300	8.04	34.25	1.03	26.70	136	0.60
206	9.00	34.16	1.66	156	400	7.02	34.28	0.58	26.88	118	0.74
236	9.02	34.25	1.22	150	500	6.27	34.33	0.37	27.02	105	0.85
276	8.41	34.24	1.16	141							
335	7.58	34.26	0.82	128							
411	6.92	34.29	0.55	117							
486	6.34	34.33	0.39	106							
566	5.90	34.33	0.35	101							

HORIZON; June 19, 1959; 1053 GCT; 32°55'N, 118°56.5'W; sounding, 910 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 05°. 90.45

1	17.82	33.71	5.31	359	0	(17.82)	(33.71)	(5.31)	(24.34)	(359)	(0.00)
11	17.45	33.68	5.47	352	10	17.50	33.68	5.46	24.41	353	0.04
31	11.88	33.57	4.10	247	20	13.10	33.58	4.50	25.30	269	0.07
41	11.08	33.60	3.75	231	30	12.01	33.57	4.15	25.50	249	0.09
56	10.50	33.68	3.28	215	50	10.60	33.67	3.33	25.84	217	0.14
71	9.88	33.66	3.22	207	75	9.71	33.67	3.20	25.98	203	0.19
96	9.32	33.81	2.85	186	100	9.31	33.84	2.72	26.18	184	0.24
116	9.26	33.95	2.29	176	150	8.75	34.01	1.96	26.40	164	0.33
136	8.90	33.98	2.01	168	200	8.09	34.12	1.48	26.59	145	0.41
156	8.67	34.02	1.91	161	250	8.03	34.20	1.13	26.67	138	0.48
185	8.18	34.11	1.56	147	300	7.33	34.22	0.85	26.78	128	0.55
219	8.04	34.14	1.42	144	400	6.63	34.27	0.51	26.92	115	0.67
248	8.04	34.20	1.15	139	500	6.00	34.32	0.37	27.04	103	0.78
296	7.38	34.22	0.87	128	600	5.45	34.35	0.32	27.13	94	0.89
350	6.95	34.25	0.62	120							
433	6.42	34.28	0.44	111							
516	5.90	34.33	0.36	101							
601	5.44	34.35	0.32	94							

a) Temperature inferred from pressure thermometer and wire depth.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

90.45 PAOLINA-T; June 25, 1959; 2107 GCT; 32°55.5'N, 118°55.5'W; sounding, 900 fm; wind, 290°, force 4; weather, partly cloudy; sea, rough; wire angle, 15°.

1	19.00	33.74	5.70	384	0	(19.00)	(33.74)	(5.70)	(24.08)	(384)	(0.00)
11	18.79	33.73	5.53	380	10	18.79	33.73	5.53	24.12	380	0.04
30	12.30	33.62	4.33	251	20	15.40	33.67	4.88	24.88	308	0.07
40	11.04	33.60	3.91	230	30	12.30	33.62	4.33	25.48	251	0.10
55	10.19	33.69	3.26	209	50	10.37	33.67	3.52	25.88	214	0.15
69	9.96	33.77	3.11	199	75	9.88	33.79	3.05	26.05	197	0.20
94	9.66	33.83	2.86	190	100	9.60	33.84	2.80	26.14	189	0.25
113	9.47	33.86	2.71	185	150	8.94	34.02	2.44	26.38	165	0.34
132	9.16	33.93	2.50	175	200	8.46	34.11	1.76	26.54	151	0.42
151	8.92	34.02	2.43	165	250	8.06	34.20	1.22	26.66	140	0.49
179	8.86	34.14	1.78	155	300	7.53	34.24	1.00	26.76	129	0.56
211	8.28	34.11	1.73	149	400	6.83	34.26	0.66	26.88	118	0.69
242	8.12	34.19	1.27	141	500	6.18	34.30	0.36	27.00	107	0.80
289	7.62	34.23	1.04	130	600	(5.54)	(34.36)	(0.28)	(27.13)	(94)	(0.91)
342	7.14	34.25	0.84	123							
423	6.70	34.27	0.57	116							
507	6.12	34.30	0.36	106							
591	5.60	34.36	0.28	96							

90.55 HORIZON; June 19, 1959; 0357 GCT; 32°16.5'N, 119°39.5'W; sounding, 240 fm; wind, 350°, force 4; weather, overcast; sea, very rough; wire angle, 37°.

2a)	14.33	33.57	-	293	0	(14.33)	(33.57)		(25.04)	(293)	(0.00)
43	13.26	33.56	5.19	273	10	(14.29)	(33.57)		(25.05)	(292)	(0.03)
84	11.84	33.58	4.48	246	20	(14.00)	(33.56)		(25.10)	(287)	(0.06)
117	9.70	33.69	3.25	202	30	(13.71)	(33.56)		(25.16)	(282)	(0.09)
151	8.96	33.86	2.78	177	50	12.84	33.56	5.03	25.33	265	0.14
173	8.52	33.96	2.49	163	75	12.13	33.57	4.63	25.48	251	0.21
195	8.30	33.99	2.27	158	100	11.02	33.61	4.01	25.71	229	0.27
217	7.90	34.04	1.92	149	150	8.98	33.86	2.80	26.25	178	0.37
235	7.66	34.05	1.84	145	200	8.23	34.00	2.19	26.48	156	0.45
252	7.54	34.06	1.78	143	250	7.56	34.06	1.79	26.62	143	0.53
262	7.48	34.07	1.74	141							

90.60 HORIZON; June 18, 1959; 2336 GCT; 32°10'N, 120°00'W; sounding, 450 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 28°.

2	15.95	33.52	5.44	330	0	(15.95)	(33.52)	(5.44)	(24.65)	(330)	(0.00)
11	15.95	33.55	5.30	328	10	15.95	33.55	5.31	24.67	328	0.03
33	15.94	33.57	5.41	327	20	15.95	33.56	5.35	24.68	327	0.06
42	15.72	33.58	5.27	321	30	15.94	33.57	5.40	24.68	327	0.10
54	14.69	33.53	5.62	304	50	15.12	33.55	5.48	24.85	311	0.16
68	13.72	33.48	5.26	288	75	13.00	33.46	4.99	25.22	276	0.24
90	11.29	33.44	4.37	246	100	11.06	33.52	4.05	25.63	236	0.30
107	10.90	33.59	3.78	229	150	9.36	33.83	2.76	26.17	186	0.41
124	10.12	33.69	3.19	209	200	8.75	33.97	2.08	26.37	166	0.50
149	9.38	33.82	2.78	187	250	8.18	34.11	1.66	26.57	148	0.58
175	9.00	33.95	2.45	171	300	7.61	34.16	1.31	26.70	136	0.65
209	8.66	33.98	1.98	164	400	6.59	34.19	0.75	26.86	120	0.78
235	8.38	34.09	1.73	152	500	5.92	34.30	0.50	27.03	104	0.90
278	7.79	34.13	1.43	140	600	(5.37)	(34.26)		(27.07)	(100)	(1.01)
336	7.38	34.22	1.03	128							
426	6.34	34.19	0.65	117							
509	5.88	34.30	0.49	103							
581	5.48	34.27	0.30	101							

a) Spacing of Nansen bottles irregular owing to an error in list of depths furnished winch operator.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
HORIZON; June 18, 1959; 1757 GCT; 31°58'N, 120°37'W; sounding, 2100 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 25°.											90.70
1	15.73	33.58	5.36	322	0	(15.73)	(33.58)	(5.36)	(24.74)	(322)	(0.00)
9	15.75	33.56	5.33	324	10	15.75	33.56	5.33	24.72	324	0.03
33	15.74	33.57	5.33	323	20	15.74	33.57	5.33	24.72	323	0.06
58	13.30	33.55	4.99	275	30	15.74	33.57	5.33	24.72	323	0.10
69	12.28	33.52	4.63	258	50	14.40	33.56	5.14	25.02	295	0.16
87	10.96	33.57	4.05	231	75	11.83	33.54	4.42	25.50	249	0.23
101	10.11	33.57	3.89	217	100	10.17	33.57	3.91	25.83	218	0.29
113	9.78	33.66	3.42	205	150	8.86	33.87	2.73	26.27	176	0.39
140	9.07	33.82	2.89	182	200	8.03	34.00	2.02	26.50	154	0.47
157	8.72	33.90	2.58	171	250	7.47	34.13	1.54	26.68	137	0.54
182	8.32	33.96	2.23	161	300	7.11	34.14	1.16	26.75	130	0.61
213	7.84	34.03	1.86	149	400	6.31	34.17	0.66	26.88	118	0.74
239	7.56	34.11	1.61	139	500	5.83	34.31	0.37	27.05	102	0.86
283	7.26	34.14	1.28	133	600	(5.51)	(34.31)		(27.09)	(98)	(0.96)
341	6.72	34.14	0.93	125							
432	6.12	34.20	0.50	114							
516	5.78	34.31	0.35	101							
589	5.54	34.31	0.30	98							
HORIZON; June 18, 1959; 1206 GCT; 31°44'N, 121°19'W; sounding, 2000 fm; wind, 330°, force 4; weather, clear; sea, very rough; wire angle, 26°.											90.80
2	15.28	33.51	5.67	317	0	(15.28)	(33.51)	(5.67)	(24.78)	(317)	(0.00)
11	15.29	33.49	5.59	319	10	15.28	33.49	5.60	24.77	319	0.03
29	15.28	33.51	5.56	317	20	15.28	33.50	5.57	24.78	318	0.06
38	15.32	33.48	5.66	320	30	15.28	33.51	5.56	24.78	317	0.10
52	14.75	33.43	5.67	312	50	15.00	33.47	5.66	24.82	315	0.16
65	14.09	33.42	5.89	300	75	13.71	33.45	5.70	25.07	290	0.23
87	13.08	33.50	5.36	274	100	12.22	33.53	5.01	25.42	256	0.30
105	11.80	33.54	4.86	248	150	9.07	33.72	3.87	26.12	190	0.42
122	10.44	33.58	4.37	222	200	8.23	33.98	2.80	26.46	158	0.50
139	9.36	33.58	4.20	204	250	7.49	34.05	2.12	26.63	142	0.58
163	8.74	33.81	3.50	178	300	7.15	34.14	1.47	26.74	132	0.65
193	8.34	33.95	2.92	162	400	6.40	34.19	0.74	26.89	118	0.78
219	7.90	34.04	2.44	149	500	5.64	34.25	0.54	27.03	104	0.90
262	7.38	34.06	2.00	140							
311	7.09	34.15	1.34	130							
389	6.48	34.19	0.78	119							
469	5.84	34.22	0.59	109							
552	5.36	34.34	0.48	94							
BLACK DOUGLAS; June 10, 1959; 0355 GCT; [a] 32°55.5'N, 117°23'W; sounding, 325 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.											93.28
386	7.42	34.27	0.55	125							
395	7.36	34.25	0.63	126							
403	7.24	34.26	0.38	124							
413	7.14	34.27	0.25	121							
422	7.09	34.24	0.43	123							
431	6.98	34.25	0.48	121							
440	6.95	34.25	0.46	120							
449	6.82	34.25	0.39	118							
458	6.78	34.24	0.52	119							
466	6.67	34.27	0.36	115							
475	6.47	34.29	0.23	111							
485	6.40	34.29	0.24	110							
494	6.28	34.33	0.24	106							
502	6.28	34.29	0.29	109							
511	6.20	34.31	0.34	106							
520	6.12	34.30	0.50	106							
529	6.10	34.31	0.35	105							
538	6.10	34.30	0.29	106							

a) Test cast.

SIO
CCOFI
5906

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
93.28	HORIZON; June 15, 1959; 2255 GCT; 32°54.5'N, 117°22'W; sounding, 250 fm; wind, 270°, force 3; weather, partly cloudy; sea, moderate; wire angle, 17°.										
1	20.90	33.73	5.53	432	0	(20.90)	(33.73)	(5.53)	(23.58)	(432)	(0.00)
11	19.07	33.68	3.08u	390	10	19.20	33.68		23.99	393	0.04
30	13.40	33.53	4.43	278	20	16.70	33.61		24.54	341	0.08
49	11.54	33.55	3.92	243	30	13.40	33.53	4.43	25.20	278	0.11
73	10.62	33.62	3.54	222	50	11.53	33.55	3.91	25.57	242	0.16
97	9.85	33.70	3.33	203	75	10.58	33.62	3.54	25.80	221	0.22
121	9.53	33.79	2.79	191	100	9.79	33.71	3.27	26.01	201	0.27
158	9.53	34.02	2.00	174	150	9.30	33.94	2.16	26.26	177	0.37
196	9.50	34.15	1.45	164	200	9.45	34.16	1.43	26.41	163	0.45
244	8.60	34.18	1.36	148	250	8.59	34.19	1.32	26.58	147	0.53
292	8.58	34.29	0.95	139	300	8.52	34.29	0.90	26.67	138	0.61
394	7.12	34.26	0.63	122	400	(7.03)	(34.26)	(0.63)	(26.85)	(121)	(0.74)
93.28	PAOLINA-T; June 24, 1959; 2302 GCT;[a] 32°54.5'N, 117°21.5'W; sounding, 320 fm; wind, 200°, force 3; weather, partly cloudy; sea, slight; wire angle, 07°.										
325	8.33	34.26	1.19	139							
335	8.12	34.27	0.71	135							
345	8.04	34.27	0.46	134							
355	7.91	34.27	0.48	132							
365	7.71	34.27	0.37	129							
375	7.58	34.28	0.42	126							
384	7.42b)	34.28	0.65	125							
394	7.18	34.27	0.50	122							
404	7.15	34.29	0.49	120							
414	7.06	34.29	0.54	119							
424	7.02	34.25	0.54	121							
434	6.96	34.27	0.55	119							
444	6.96	34.27	0.50	119							
454	6.97	34.26	0.53	120							
464	6.93	34.25	0.53	120							
474	6.62	34.28	0.42	114							
484	6.44	34.27	0.40	112							
495	6.42	34.27	0.39	112							
93.28	PAOLINA-T; June 25, 1959; 0046 GCT; 32°54.5'N, 117°21.5'W; sounding, 241 fm; wind, 220°, force 3; weather, cloudy; sea, slight; wire angle, 07°.										
1	22.38	33.79	5.28	467	0	(22.38)	(33.79)	(5.28)	(23.22)	(467)	(0.00)
11	17.55	33.51	5.66	367	10	19.80	33.63	5.49	23.79	412	0.04
31	13.1	33.62	5.48	266	20	15.0	33.53	5.60	24.86	310	0.08
56	11.32	33.56	3.59	238	30	13.1	33.62	5.48	25.32	266	0.11
80	10.40	33.68	3.37	214	50	11.6	33.56	3.68	25.58	242	0.16
104	10.08	33.84	2.97	196	75	10.45	33.63	3.42	25.82	218	0.22
139	9.72	33.84	2.83	191	100	10.17	33.83	2.99	26.04	198	0.27
177	9.53	33.95	2.25	180	150	9.67	33.85	2.73	26.14	188	0.37
226	9.28	34.23	1.30	155	200	9.42	34.09	1.76	26.36	167	0.46
276	9.00	34.33	0.96	143	250	9.16	34.30	1.07	26.57	148	0.54
374	7.80	34.27	0.80	130	300	8.75	34.32	0.92	26.65	140	0.61
412c)	7.10	34.25	0.38	122							

a) Test cast.
b) Alternate value, 7.49°C.
c) Ship apparently drifted into shallower water while occupying this station so that last Nansen bottle of this cast rested on the bottom.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

HORIZON; June 16, 1959; 0052 GCT; 32°50'N, 117°31.5'W; sounding, 465 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 20°. 93.30

3	20.31	33.74	5.80	417	0	(20.31)	(33.74)	(5.80)	(23.74)	(417)	(0.00)
12	19.08	33.68	5.89	391	10	19.40	33.69	5.88	23.94	398	0.04
31	14.98	33.57	5.90	307	20	17.35	33.63	5.90	24.40	354	0.08
40	13.36	33.54	5.16	276	30	15.20	33.58	5.90	24.85	311	0.11
50	12.36	33.57	4.56	255	50	12.36	33.57	4.56	25.44	255	0.17
65	11.60	33.57	4.17	242	75	11.09	33.61	3.78	25.70	231	0.23
79	10.84	33.62	3.66	226	100	10.08	33.67	3.46	25.92	209	0.28
97	10.14	33.66	3.51	211	150	9.48	33.96	2.30	26.25	178	0.38
120	9.74	33.82	2.91	192	200	9.04	34.11	1.89	26.43	161	0.47
137	9.47	33.87	2.62	185	250	9.10	34.27	1.17	26.55	150	0.55
164	9.49	34.05	1.98	172	300	8.50	34.25	1.08	26.64	141	0.62
192	9.02	34.07	1.97	163	400	7.17	34.25	0.64	26.82	124	0.76
219	9.15	34.20	1.48	155	500	6.29	34.29	0.47	26.98	109	0.88
255	9.06	34.27	1.12	149							
310	8.36	34.25	1.06	140							
379	7.42	34.24	0.73	128							
449	6.66	34.27	0.45	115							
528	6.08	34.30	0.49	106							

HORIZON; June 16, 1959; 0548 GCT; 32°40'N, 117°52'W; sounding, 190 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 08°. 93.35

1	19.60	33.71	5.51	401	0	(19.60)	(33.71)	(5.51)	(23.90)	(401)	(0.00)
12	18.28	33.68	5.55	371	10	18.48	33.68	5.55	24.17	376	0.04
33	14.19	33.56	5.67	291	20	16.90	33.63	5.59	24.51	343	0.07
52	12.42	33.56	4.67	258	30	14.92	33.57	5.66	24.91	305	0.11
76	10.47	33.64	3.93	218	50	12.58	33.56	4.73	25.38	260	0.16
100	9.73	33.78	3.12	195	75	10.51	33.63	3.96	25.82	219	0.22
125	9.35	33.86	3.20	184	100	9.73	33.78	3.12	26.07	195	0.28
165	9.25	34.06	1.94	167	150	9.30	33.99	2.38	26.30	173	0.37
204	8.82	34.14	1.64	155	200	8.89	34.13	1.66	26.48	156	0.45
252	7.98	34.16	1.41	141	250	8.01	34.16	1.44	26.63	142	0.53
303	7.78	34.22	1.02	134	300	7.79	34.22	1.07	26.72	134	0.60

HORIZON; June 16, 1959; 0745 GCT; 32°31.5'N, 118°12.5'W; sounding, 810 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 18°. 93.40

1	17.42	33.68	4.75	352	0	(17.42)	(33.68)	(4.75)	(24.42)	(352)	(0.00)
10	17.35	33.66	5.38	352	10	17.35	33.66	5.38	24.42	352	0.04
34	12.56	33.56	4.78	260	20	15.15	33.60	5.21	24.88	308	0.07
44	11.54	33.56	3.92	242	30	13.20	33.56	4.96	25.26	272	0.10
57	10.54	33.61	3.52	221	50	11.09	33.57	3.75	25.67	233	0.15
71	10.14	33.73	3.05	206	75	10.11	33.77	2.96	26.00	202	0.20
94	9.63	33.82	2.66	191	100	9.59	33.86	2.57	26.15	187	0.25
112	9.50	33.93	2.35	181	150	8.83	34.02	2.00	26.40	164	0.34
131	9.14	33.97	2.15	172							
158	8.74	34.04	1.93	161							
187	8.48	34.12	1.65	151							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.40 PAOLINA-T; June 26, 1959; 1425 GCT; 32°29.5'N, 118°12.5'W; sounding, 800 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°.

2	18.46	33.75	5.32	371	0	(18.46)	(33.75)	(5.32)	(24.22)	(371)	(0.00)
12	18.49	33.77	5.41	370	10	18.48	33.77	5.40	24.23	370	0.04
36	11.10	33.66	3.70	227	20	14.24	33.70	4.47	25.16	282	0.07
46	10.36	33.71	3.00	210	30	11.58	33.66	3.84	25.65	235	0.10
60	9.78	33.78	3.28	196	50	10.15	33.74	3.10	25.96	205	0.14
75	9.51	33.78	2.93	192	75	9.51	33.78	2.93	26.10	192	0.19
99	9.20	33.98	2.26	172	100	9.20	33.98	2.24	26.31	172	0.24
118	9.18	34.05	1.91	167	150	8.76	34.10	1.67	26.48	156	0.32
137	9.02	34.07	1.82	163	200	8.22	34.18	1.25	26.62	143	0.40
164	8.44	34.14	1.49	150	250	7.61	34.18	1.07	26.71	134	0.46
194	8.28	34.18	1.26	144	300	7.20	34.22	0.88	26.81	125	0.53
232	7.83	34.16	1.23	139	400	6.75	34.28	0.49	26.91	116	0.66
261	7.48	34.20	0.98	131	500	6.01	34.32	0.36	27.04	103	0.77
310	7.13	34.23	0.85	124	600	5.46	34.36	0.31	27.14	93	0.87
373	6.96	34.26	0.57	119							
471	6.19	34.31	0.37	106							
561	5.66	34.35	0.34	97							
635	5.28	34.38	0.27	90							

93.50 HORIZON; June 16, 1959; 1325 GCT; 32°10'N, 118°53.5'W; sounding, 800 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 28°.

4	14.86	33.60	5.60	303	0	14.9	(33.60)		(24.94)	(303)	(0.00)
13	14.87	33.61	5.63	301	10	14.86	33.61	5.63	24.95	301	0.03
35	13.88	33.57	-	285	20	14.87	33.62	5.62	24.96	301	0.06
45	13.44	33.58	4.82	275	30	14.70	33.60	5.57	24.98	298	0.09
57	12.44	33.56	4.46	258	50	13.09	33.57	4.65	25.29	269	0.15
70	11.62	33.57	4.31	243	75	11.28	33.58	4.10	25.64	235	0.21
91	10.31	33.62	3.47	216	100	9.99	33.64	3.36	25.92	209	0.27
108	9.70	33.67	3.24	203	150	8.41	33.92	2.60	26.39	165	0.36
124	9.06	33.75	2.95	187	200	8.24	34.03	1.85	26.50	154	0.44
149	8.42	33.92	2.60	165	250	7.59	34.14	1.22	26.68	137	0.52
175	8.27	33.94	2.30	161	300	7.09	34.22	0.88	26.82	124	0.58
209	8.20	34.07	1.68	151	400	6.60	34.29	0.51	26.94	113	0.71
270p	7.29	34.16	1.05	131	500	6.14	34.29	0.43	27.00	107	0.82
326p	6.96	34.26	0.73	120							
425p	6.48	34.29	0.45	111							
497p	6.16	34.29	0.43	107							
569p	5.83	34.33	0.40	100							

93.60 HORIZON; June 16, 1959; 1912 GCT; 31°54'N, 119°38'W; sounding, 1040 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 19°.

2	15.23	33.53	5.55	315	0	(15.23)	(33.53)	(5.55)	(24.81)	(315)	(0.00)
12	15.22	33.53	5.59	315	10	15.22	33.53	5.59	24.81	315	0.03
35	15.03	33.51	5.60	312	20	15.17	33.52	5.60	24.82	314	0.06
64	14.01	33.45	5.39	296	30	15.09	33.51	5.60	24.83	313	0.09
74	12.96	33.39	5.13	280	50	14.80	33.49	5.56	24.88	308	0.16
93	11.12	33.51	4.03	238	75	12.94	33.39	5.12	25.18	279	0.23
107	10.47	33.62	3.57	219	100	10.83	33.56	3.80	25.70	230	0.29
121	9.84	33.66	3.52	206	150	9.39	33.83	2.82	26.16	186	0.40
148	9.42	33.82	2.86	188	200	8.70	34.02	2.02	26.42	162	0.49
167	9.07	33.91	2.51	176	250	8.13	34.13	1.76	26.60	145	0.57
194	8.77	34.00	2.10	164	300	7.65	34.19	1.33	26.71	134	0.64
226	8.36	34.09	1.75	151	400	6.68	34.26	0.80	26.90	116	0.77
254	8.09	34.14	1.77	144	500	5.96	34.31	0.56	27.04	103	0.88
300	7.65	34.19	1.33	134	600	5.28	34.34	0.51	27.14	93	0.99
360	6.97	34.23	0.95	122							
454	6.34	34.29	0.64	109							
542	5.62	34.33	0.51	98							
616	5.20	34.34	0.52	92							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	$10\ cm^3/g$	m	°C	‰	ml/L	g/L	$10\ cm^3/g$	dyn. m

PAOLINA-T; June 30, 1959; 0035 GCT; 31°50'N, 119°34'W; sounding, 1250 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 06°. 93.60

2	16.12	33.58	5.62	330	0	(16.12)	(33.58)	(5.62)	(24.65)	(330)	(0.00)
12	15.76	33.55	5.85	324	10	15.78	33.55	5.85	24.71	325	0.03
33	15.44	33.58	5.62	316	20	15.62	33.56	5.75	24.75	320	0.06
43	15.31	33.57	5.82	314	30	15.47	33.58	5.63	24.79	316	0.10
53	15.08	33.60	5.76	307	50	15.14	33.59	5.76	24.87	309	0.16
66	14.92	33.60	5.88	303	75	13.90	33.52	5.48	25.08	289	0.23
81	13.10	33.47	5.11	277	100	11.14	33.51	4.05	25.62	238	0.30
101	11.09	33.51	4.03	238	150	9.29	33.85	2.77	26.20	183	0.41
125	9.96	33.69	3.39	205	200	8.53	34.02	2.05	26.44	160	0.49
143	9.42	33.82	2.91	188	250	7.68	34.10	1.63	26.64	141	0.57
173	8.88	33.93	2.46	171	300	7.23	34.18	1.27	26.76	129	0.64
202	8.51	34.02	2.03	159	400	6.68	34.27	0.66	26.91	116	0.77
231	8.06	34.09	1.71	147	500	6.03	34.34	0.47	27.05	102	0.88
270	7.28	34.11	1.54	135							
328	7.20	34.23	1.08	125							
401	6.68	34.27	0.66	116							
475	6.20	34.32	0.49	105							
554	5.70	34.37	0.47	96							

HORIZON; June 17, 1959; 0414 GCT; 31°40'N, 120°12.5'W; sounding, 2000 fm; wind, 330°, force 5; weather, clear; sea, high; wire angle, 35°. 93.70

2	16.00	33.57	5.48	328	0	(16.00)	(33.57)	(5.48)	(24.67)	(328)	(0.00)
9	16.02	33.57	5.55	328	10	16.02	33.57	5.55	24.67	328	0.03
30	16.02	33.57	5.58	328	20	16.02	33.57	5.57	24.67	328	0.06
54	15.92	33.55	5.57	328	30	16.02	33.57	5.58	24.67	328	0.10
63	15.82	33.57	5.62	324	50	15.94	33.56	5.57	24.68	328	0.16
79	13.84	33.48	5.37	290	75	14.42	33.50	5.51	24.97	300	0.24
89	12.55	33.52	4.55	263	100	11.20	33.48	4.31	25.58	242	0.31
102	10.94	33.48	4.25	237	150	9.59	33.79	3.07	26.10	192	0.42
123	10.14	33.68	3.55	210	200	8.51	33.95	2.60	26.40	164	0.51
137	9.82	33.73	3.28	201	250	7.90	34.05	2.10	26.56	148	0.59
158	9.42	33.82	2.96	188	300	7.33	34.10	1.63	26.68	137	0.66
184	8.84	33.91	2.69	172	400	6.38	34.15	0.97	26.86	120	0.80
206	8.42	33.96	2.57	162	500	5.82	34.25	0.49	27.00	107	0.92
249	7.92	34.05	2.11	148							
383	6.49	34.14	1.07	123							
462	6.03	34.21	0.66	112							
533	5.64	34.29	0.36	101							

PAOLINA-T; June 29, 1959; 1307 GCT; 31°05'N, 120°55'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 10°. 93.80

0	16.29	33.49	5.49	340	0	16.29	33.49	5.49	24.55	340	0.00
10	16.30	33.50	5.50	340	10	16.30	33.50	5.50	24.55	340	0.03
30	15.89a)	33.55	5.50	328	20	16.29	33.51	5.50	24.56	339	0.07
40	15.50	33.51	5.55	322	30	15.89	33.55	5.50	24.68	328	0.10
54	15.18	33.49	5.53	316	50	15.28	33.50	5.55	24.77	318	0.16
68	14.48	33.48	5.43	303	75	14.24	33.50	5.37	25.01	296	0.24
93	13.06	33.53	-	271	100	12.56	33.53	5.01	25.36	263	0.31
113	11.67	33.53	4.86	246	150	9.63	33.66	4.67	25.99	203	0.43
133	10.72	33.57	-	227	200	8.54	33.89	3.04	26.34	169	0.53
152	9.53	33.67	4.62	200	250	7.88	34.03	2.21	26.56	149	0.61
180	8.76	33.78	3.62	180	300	7.49	34.08	1.61	26.64	140	0.68
215	8.39	33.95	2.72	162	400	6.60	34.16	0.96	26.84	122	0.82
243	7.95	34.02	2.33	151	500	5.92	34.24	0.55	26.98	108	0.94
293	7.57	34.07	1.70	142	600	(5.33)	(34.33)	(0.38)	(27.13)	(94)	(1.05)
346	6.96	34.11	1.37	131							
430	6.41	34.19	0.79	118							
513	5.82	34.25	0.51	106							
598	5.34	34.33	0.39	95							

a) Alternate value, 16.08° C, not used in interpolation.

SIO
CCOFI
5906

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

93.90 PAOLINA-T; June 29, 1959; 0518 GCT; 30°46'N, 121°36.5'W; sounding, 2140 fm; wind, 320°, force 6; weather, cloudy; sea, high; wire angle, 13°.

2	16.64	33.50	5.32	348	0	(16.64)	(33.50)	(5.32)	(24.46)	(348)	(0.00)
13	16.69	33.48	5.25	350	10	16.67	33.49	5.27	24.45	349	0.03
32	16.68	33.49	5.30	349	20	16.69	33.48	5.25	24.44	350	0.07
42	16.57	33.51	5.34	345	30	16.69	33.49	5.27	24.45	349	0.10
56	15.94	33.44	5.43	336	50	15.94	33.43	5.43	24.58	337	0.17
70	15.82	33.48	5.35	331	75	15.76	33.50	5.34	24.67	328	0.26
95	14.76	33.62	5.39	298	100	14.45	33.62	5.33	25.06	292	0.34
114	13.22	33.57	5.11	272	150	10.12	33.59	4.37	25.86	216	0.46
134	11.60	33.52	4.72	246	200	8.74	33.82	3.40	26.26	177	0.56
153	9.90	33.60	4.31	212	250	8.01	33.98	2.36	26.49	155	0.65
183	8.98	33.77	3.73	185	300	7.29	34.06	1.84	26.66	139	0.73
215	8.54	33.86	3.08	171	400	6.34	34.15	0.83	26.86	120	0.86
245	8.08	33.96	2.42	157	500	5.76	34.22	0.47	26.99	108	0.98
293	7.39	34.05	1.93	141	600	5.26	34.29	0.34	27.10	97	1.09
347	6.72	34.10	1.05	129							
430	6.14	34.18	0.71	115							
514	5.69	34.23	0.43	106							
600	5.26	34.29	0.34	97							

97.32 ORCA; June 3, 1959; 0240, 0320 GCT;[a] 32°11.5'N, 117°17'W; sounding, 720 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 29°, 29°.

400b)	6.89	34.27	0.59	118
409	6.84	34.33	0.42	112
419	6.76	34.31	0.40	113
429	6.66	34.30	0.36	113
440	6.63	34.32	0.40	111
448	6.54	34.33	0.39	109
458	6.48	34.32	0.35	109
469	6.38	34.34	0.33	106
478	6.32	34.33	0.30	106
487	6.25	34.34	0.32	104
498	6.18	34.34	0.32	104
497c)	6.22	34.34	0.34	104
507b)	6.15	34.27	0.65	109
517	6.10	34.33	0.28	104
527b)	6.03	34.31	0.55	104
537	5.98	34.34	0.34	101
547	5.90	34.36	0.27	99
559	5.88	34.35	0.29	100

97.60 PAOLINA-T; June 27, 1959; 2035 GCT; 31°26.5'N, 118°59'W; sounding, 800 fm; wind, 300°, force 5; weather, cloudy; sea, very rough; wire angle, 15°.

2	16.54	33.58	5.39	340	0	(16.54)	(33.58)	(5.39)	(24.55)	(340)	(0.00)
11	16.56	33.58	5.36	340	10	16.56	33.58	5.36	24.55	340	0.03
30	16.48	33.58	5.33	338	20	16.54	33.58	5.35	24.56	339	0.07
40	16.06	33.55	5.30	331	30	16.48	33.58	5.33	24.57	338	0.10
54	14.01	33.45	5.41	296	50	14.20	33.46	5.43	24.98	299	0.16
69	12.50	33.41	4.73	270	75	12.14	33.45	4.50	25.38	260	0.24
92	11.02	33.58	3.88	231	100	10.47	33.63	3.76	25.82	218	0.30
111	9.90	33.68	3.63	206	150	9.35	33.84	2.94	26.18	184	0.40
130	9.62	33.75	3.44	196	200	8.49	33.99	2.10	26.43	161	0.49
149	9.37	33.84	2.95	185	250	8.08	34.12	1.58	26.60	145	0.56
177	8.74	33.96	2.45	167	300	7.56	34.17	1.16	26.71	134	0.64
211	8.38	34.00	1.95	158	400	6.72	34.26	0.62	26.90	117	0.77
240	8.18	34.11	1.66	148	500	6.16	34.33	0.41	27.03	104	0.88
288	7.67	34.16	1.24	137	600	(5.49)	(34.34)	(0.33)	(27.12)	(95)	(0.99)
342	7.16	34.22	0.89	125							
425	6.53	34.27	0.50	114							
507	6.11	34.33	0.40	104							
592	5.54	34.34	0.33	96							

a) Test cast.
b) It seems possible that these Nansen bottles failed to close tightly at the time of reversal.
c) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; June 25, 1959; 2312 GCT; 30°41'N, 118°47.5'W; sounding, 1500 fm; wind, 320°, force 6; weather, clear; sea, high; wire angle, missing. 100.60

2	17.30	33.68	5.54	349	0	(17.30)	(33.68)	(5.54)	(24.45)	(349)	(0.00)
11	17.30	33.68	5.29	349	10	17.30	33.68	5.30	24.45	349	0.03
33	17.02	33.68	5.38	343	20	17.21	33.68	5.30	24.47	347	0.07
41	16.96	33.68	5.45	342	30	17.07	33.68	5.35	24.50	344	0.10
54	16.36	33.60	5.56	334	50	16.59	33.63	5.56	24.58	336	0.17
67	14.92	33.52	5.61	309	75	13.86	33.48	5.32	25.07	290	0.25
89	12.50	33.47	4.63	266	100	12.19	33.48	4.51	25.39	259	0.32
106	11.40	33.51	4.29	243	150	9.37	33.81	3.20	26.15	188	0.43
123	10.24	33.57	3.95	220	200	8.47	33.96	2.50	26.41	163	0.52
148	9.41	33.80	3.23	189	250	7.68	34.06		26.61	144	0.60
173	8.94	33.88	2.95	176	300	7.20	34.09		26.70	135	0.67
206	8.36	33.98	2.40	160	400	6.60	34.19	0.78	26.86	120	0.81
230	7.92	34.04	2.16	149	500	6.04	34.31	0.37	27.03	104	0.92
272	7.44	34.07	0.88u	140							
328	6.96	34.12	1.31	130							
415	6.53	34.21	0.67	118							
494	6.08	34.31	0.39	105							
559	5.70	34.33	0.34	99							

BLACK DOUGLAS; June 25, 1959; 0710 GCT; 29°38'N, 120°45'W; sounding, 2000+ fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 22°. 100.90

2	17.88	33.84	5.33	351	0	(17.88)	(33.84)	(5.33)	(24.44)	(351)	(0.00)
10	17.91	33.82	5.29	352	10	17.91	33.82	5.29	24.41	352	0.04
31	17.94	33.84	5.30	352	20	17.93	33.83	5.30	24.42	352	0.07
56	18.08	33.95	5.32	348	30	17.94	33.84	5.30	24.42	352	0.10
64	18.07	33.94	5.33	348	50	18.08	33.94	5.32	24.46	348	0.18
81	17.96	33.95	5.29	345	75	18.00	33.95	5.29	24.48	346	0.26
93	16.50	33.77	5.29	325	100	15.84	33.72	5.37	24.82	314	0.35
105	15.39	33.69	5.41	306	150	11.47	33.58	4.64	25.60	239	0.49
129	13.26	33.62	5.03	269	200	9.12	33.79	3.55	26.18	185	0.59
145	11.85	33.58	4.72	246	250	8.22	33.98	2.57	26.46	158	0.68
169	10.32	33.64	4.24	215	300	7.60	34.07	2.04	26.62	143	0.76
197	9.22	33.77	3.63	188	400	6.66	34.14	1.10	26.81	125	0.90
221	8.66	33.89	3.01	171	500	6.03	34.24	0.50	26.97	109	1.02
261	8.08	34.00	2.45	155							
317	7.41	34.09	1.82	138							
403	6.63	34.14	1.08	124							
483	6.12	34.22	0.56	112							
550	5.70	34.31	0.35	100							

BLACK DOUGLAS; June 24, 1959; 1148 GCT; 30°06'N, 118° 25.5'W; sounding, 1750 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 00°. 103.60

1	17.74	33.66	5.06	360	0	(17.74)	(33.66)	(5.06)	(24.33)	(360)	(0.00)
10	17.68	33.64	5.23	360	10	17.68	33.64	5.23	24.33	360	0.04
28	16.86	33.57	5.37	347	20	17.08	33.59	5.33	24.44	350	0.07
37	16.48	33.54	5.42	341	30	16.80	33.57	5.37	24.48	346	0.11
46	16.30	33.52	5.42	338	50	16.22	33.51	5.43	24.58	337	0.17
59	15.62	33.48	5.50	326	75	14.89	33.46	5.58	24.83	313	0.26
73	14.98	33.46	5.59	315	100	12.47	33.43	5.04	25.30	268	0.33
90	13.66	33.44	5.42	290	150	9.92	33.60	3.94	25.89	212	0.45
113	11.80	33.43	4.75	256	200	8.66	33.90	2.80	26.33	170	0.55
131	10.44	33.55	4.07	224	250	8.00	34.00	2.03	26.51	153	0.63
159	9.72	33.62	3.87	207	300	7.40	34.07	1.56	26.65	140	0.71
185	9.01	33.80	3.14	183	400	6.62	34.16	0.80	26.84	122	0.84
211	8.46	33.93	2.64	165	500	5.87	34.26	0.36	27.01	106	0.96
248	8.02	33.99	2.13	154							
300	7.40	34.07	1.56	140							
368	6.91	34.14	1.02	128							
436	6.28	34.20	0.58	115							
507	5.83	34.27	0.34	105							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm/g	ΔD dyn. m

107.60 BLACK DOUGLAS; June 22, 1959; 2317 GCT; 29°31'N, 118°03'W; sounding, 1850 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 12°.

1	17.68	33.70	5.29	356	0	(17.68)	(33.70)	(5.29)	(24.38)	(356)	(0.00)
10	17.67	33.69	5.35	357	10	17.67	33.69	5.35	24.37	357	0.04
27	17.37	33.69	5.38	350	20	17.49	33.69	5.37	24.42	352	0.07
36	17.28	33.69	5.49	348	30	17.34	33.69	5.40	24.45	349	0.11
62	16.80	33.64	5.66	341	50	17.08	33.67	5.58	24.50	345	0.18
84	15.81	33.53	5.80	327	75	16.32	33.58	5.74	24.61	334	0.26
102	13.76	33.60	5.37	280	100	14.20	33.59	5.51	25.08	289	0.34
119	12.58	33.61	4.79	256	150	10.44	33.64	4.40	25.84	217	0.47
136	11.52	33.63	4.69	236	200	8.91	33.81	3.39	26.23	180	0.57
161	9.82	33.66	4.10	206	250	8.09	33.99	2.60	26.49	155	0.66
193	9.08	33.77	3.55	186	300	7.48	34.04	2.10	26.61	144	0.73
218	8.57	33.89	3.07	169	400	6.54	34.17	1.08	26.85	121	0.87
262	7.92	34.01	2.41	151	500	5.84	34.23	0.63	26.99	108	0.99
311	7.34	34.05	1.93	140							
385	6.66	34.16	1.18	124							
460	6.12	34.21	0.77	113							
537	5.54	34.25	0.51	103							

110.60 BLACK DOUGLAS; June 21, 1959; 1225 GCT; 28°57'N, 117°27.5'W; sounding, 1700 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 12°.

1	17.92	33.73	5.07	360	0	(17.92)	(33.73)	(5.07)	(24.34)	(360)	(0.00)
10	17.94	33.73	5.94u	360	10	17.94	33.73		24.34	360	0.04
28	18.05	33.83	4.85	355	20	18.02	33.78		24.36	358	0.07
36	17.96	33.81	4.75	355	30	18.04	33.83	4.83	24.39	355	0.11
44	17.80	33.78	5.05	353	50	17.65	33.75	5.04	24.42	352	0.18
57	17.53	33.73	4.99	350	75	17.58	33.78		24.46	348	0.26
70	17.60	33.77	-	349	100	15.90	33.77	5.18	24.85	311	0.35
87	17.24	33.80	5.25	339	150	11.31	33.66	4.10	25.70	230	0.48
104	15.33	33.75	5.11	300	200	10.11	33.90	2.67	26.10	192	0.59
126	13.17	33.66	4.64	264	250	9.49	34.16	1.69	26.40	164	0.68
152	11.18	33.66	4.06	228	300	8.88	34.27	1.10	26.58	146	0.76
178	10.30	33.76	3.43	206	400	7.73	34.30	0.60	26.79	127	0.91
203	10.08	33.93	2.56	190	500	(6.63)	(34.33)	(0.40)	(26.96)	(110)	(1.03)
237	9.68	34.12	1.87	170							
289	8.99	34.25	1.18	149							
354	8.32	34.33	0.72	133							
420	7.47	34.29	0.56	125							
490	6.72	34.32	0.41	112							

110.90 BLACK DOUGLAS; June 22, 1959; 0340 GCT; 27°56.5'N, 119°36'W; sounding, 2000+ fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 08°.

1	18.50	33.83	5.19	366	0	(18.50)	(33.83)	(5.19)	(24.27)	(366)	(0.00)
10	18.50	33.82	5.11	367	10	18.50	33.82	5.11	24.26	367	0.04
28	18.33	33.82	5.10	362	20	18.42	33.82	5.10	24.28	364	0.07
36	18.36	33.84	5.19	362	30	18.34	33.83	5.12	24.31	362	0.11
50	17.92	33.84	5.20	351	50	17.92	33.84	5.20	24.43	351	0.18
63	17.86	33.88	5.33	347	75	17.69	33.87	5.30	24.50	344	0.27
85	16.96	33.80a)	5.08	333	100	15.95	33.76	5.26	24.83	313	0.35
103	15.38	33.75a)	5.34	302	150	11.49	33.68	3.87	25.68	232	0.49
121	13.96	33.74a)	4.50	273	200	10.21	33.98	2.36	26.12	189	0.60
137	12.34	33.65a)	4.27	249	250	9.39	34.20	1.60	26.45	159	0.68
165	10.92	33.77a)	3.31	216	300	8.78	34.29	1.19	26.62	143	0.76
195	10.32	33.95a)	2.46	192	400	7.64	34.29	0.62	26.79	126	0.90
222	9.67	34.10	1.98	171	500	6.44	34.32	0.41	26.98	108	1.03
265	9.26	34.23	1.44	155							
315	8.54	34.30	1.08	138							
390	7.78	34.29a)	0.64	128							
465	6.75	34.31a)	0.48	113							
541	6.20	34.33a)	0.31	105							

a) The silver nitrate used to titrate these samples appears to have been poorly mixed. These salinity values may be as much as 0.04‰ higher.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; June 16, 1959; 2338 GCT; 28°17'N, 117°21.5'W; sounding, 2000+ fm; wind, 310°, force 5; weather, partly cloudy; sea, very rough; wire angle, 23°. 113.60

2	17.76	33.67	5.29	360	0	(17.76)	(33.67)	(5.29)	(24.33)	(360)	(0.00)
10	17.73	33.67	5.33	359	10	17.73	33.67	5.33	24.34	359	0.04
30	17.57	33.67	5.34	356	20	17.67	33.67	5.34	24.36	358	0.07
59	17.14	33.63	5.11	349	30	17.57	33.67	5.34	24.38	356	0.11
68	16.92	33.62	5.51	344	50	17.31	33.64	5.18	24.43	351	0.18
82	16.52	33.63	5.64	335	75	16.72	33.62	5.59	24.54	340	0.26
94	15.54	33.55	5.57	320	100	14.67	33.50	5.50	24.90	306	0.35
105	13.94	33.48	5.39	292	150	10.68	33.63	4.14	25.78	222	0.48
134	11.91	33.58	4.70	246	200	9.48	33.92	2.59	26.22	181	0.58
153	10.49	33.64	4.01	218	250	9.02	34.13	1.96	26.46	158	0.67
181	9.78	33.86	2.97	190	300	7.58	34.06	1.73	26.62	143	0.75
207	9.40	33.95	2.47	178	400	6.61	34.14	1.05	26.82	124	0.89
236	9.32	34.13	2.04	163	500	6.35	34.32	0.40	26.99	108	1.01
283	7.88	34.05	1.79	148	600	(5.71)	(34.32)		(27.07)	(100)	(1.12)
336	7.12	34.09	1.63	134							
415	6.55	34.16	0.90	122							
494	6.36	34.31	0.41	108							
581	5.84	34.32	0.28	102							

ORCA; June 15, 1959; 0049 GCT; 28°08'N, 116°16'W; sounding, 2500 fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 40°. 117.50

1	16.80	33.67	5.75	338	0	(16.80)	(33.67)	(5.75)	(24.56)	(338)	(0.00)
9	16.76	33.66	5.82	338	10	16.75	33.66	5.83	24.56	338	0.03
24	16.63	33.64	5.97	338	20	16.68	33.64	5.96	24.57	338	0.07
32	16.27	33.62	5.93	330	30	16.46	33.62	5.94	24.65	330	0.10
43	15.30	33.72	5.50	302	50	14.75	33.75	5.23	25.08	289	0.16
54	14.52	33.75	5.14	284	75	11.88	33.61	4.16	25.56	244	0.23
73	11.93	33.61	4.18	245	100	10.80	33.66	3.86	25.79	222	0.29
88	11.38	33.64	3.95	233	150	9.63	33.94	2.58	26.21	182	0.39
102	10.72	33.66	3.84	221	200	9.53	34.25	1.37	26.47	157	0.48
116	10.16	33.75	3.58	204	250	8.69	34.26	1.09	26.61	144	0.55
134	9.78	33.85	3.12	190	300	7.73	34.20	1.24	26.71	134	0.62
156	9.59	33.98	2.37	178	400	7.12	34.32	0.54	26.89	117	0.75
174	9.74	34.14	1.90	169							
205	9.46	34.26	1.32	156							
242	8.86	34.27	1.07	146							
303	7.70	34.20	1.24	134							
371	7.35	34.29	0.66	123							
446	6.67	34.37	0.41	108							

ORCA; June 12, 1959; 0913 GCT; 27°31.5'N, 115°52'W; sounding, 2000+ fm; wind, 310°, force 2; weather, cloudy; sea, very rough; wire angle, missing. 120.50

1	17.78	33.74	5.30	356	0	(17.78)	(33.74)	(5.30)	(24.38)	(356)	(0.00)
10	17.77	33.73	5.38	356	10	17.77	33.73	5.38	24.37	356	0.04
30	17.65	33.70	5.33	356	20	17.69	33.71	5.37	24.38	356	0.07
39	17.63	33.73	5.39	353	30	17.65	33.70	5.33	24.38	356	0.11
53	17.06	33.71	5.58	341	50	17.42	33.72	5.50	24.46	348	0.18
67	16.20	33.69	5.60	324	75	15.09	33.68	5.45	24.96	301	0.26
90	13.48	33.68	5.02	269	100	12.92	33.68	4.82	25.40	258	0.33
108	11.82	33.68	4.36	238	150	10.47	34.03	2.40	26.14	188	0.44
125	10.44	33.73	3.55	210	200	10.66	34.36	1.10	26.36	168	0.53
145	10.44	33.98	2.62	192	250	10.46	34.63	0.62	26.60	144	0.61
173	10.68	34.25	1.50	176	300	9.52	34.46	0.65	26.63	142	0.68
205	10.66	34.39	1.00	166	400	8.39	34.40	0.37	26.77	128	0.82
232	10.66	34.63	0.63	148	500	(7.06)	(34.42)	(0.34)	(26.97)	(109)	(0.95)
279	9.86	34.53	0.61	142							
331	9.10	34.38	0.70	142							
411	8.28	34.41	0.34	127							
494	7.14	34.42	0.34	110							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

120.80 ORCA; June 11, 1959; 1535 GCT; 26°35'N, 117°45'W; sounding, 2000+ fm; wind, 320°, force 1; weather, overcast; sea, high; wire angle, 10°.

0	18.55	33.99	5.29	356	0	18.55	33.99	5.29	24.38	356	0.00
9	18.56	33.99	5.13	356	10	18.56	33.99	5.13	24.38	356	0.04
29	18.56	33.96	5.29	358	20	18.56	33.97	5.18	24.37	357	0.07
59	18.50	34.07	5.29	348	30	18.56	33.96	5.29	24.36	358	0.11
68	17.81	34.02	5.36	336	50	18.60	33.98	5.29	24.36	358	0.18
85	17.35	34.22	5.33	311	75	17.58	34.12	5.36	24.72	323	0.26
100	15.69	33.95	5.06	294	100	15.69	33.95	5.06	25.03	294	0.34
114	14.00	33.78	4.68	272	150	10.95	33.72	3.81	25.81	220	0.47
139	11.43	33.69	4.07	230	200	10.03	34.05	2.26	26.22	180	0.57
159	10.64	33.77	3.58	211	250	9.60	34.34	1.20	26.52	152	0.66
189	10.06	33.98	2.54	186	300	8.68	34.33	0.94	26.67	138	0.73
219	10.00	34.18	1.83	170	400	7.57	34.35	0.55	26.85	121	0.87
248	9.63	34.34	1.22	152	500	6.62	34.40	0.35	27.02	105	0.99
298	8.70	34.33	0.95	139	600	5.93	34.39	0.27	27.10	97	1.09
352	8.05	34.34	0.70	128							
437	7.20	34.36	0.43	116							
523	6.42	34.40	0.31	102							
608	5.88	34.39	0.26	96							

123.42 ORCA; June 10, 1959; 0655 GCT; 27°13.5'N, 115°00'W; sounding, 600 fm; wind, 320°, force 6; weather, missing; sea, high; wire angle, 14°.

1	16.84	33.74	5.66	334	0	(16.84)	(33.74)	(5.66)	(24.61)	(334)	(0.00)
10	16.84	33.75	5.73	334	10	16.84	33.75	5.73	24.61	334	0.03
35	13.55	33.57	4.87	278	20	15.50	33.68	5.35	24.86	310	0.06
46	12.66	33.68	4.48	253	30	13.74	33.57	4.90	25.16	282	0.10
60	11.25	33.76	3.45	222	50	11.90	33.74	3.85	25.65	235	0.15
74	10.48	33.78	3.40	207	75	10.35	33.81	3.24	25.98	203	0.20
99	10.02	33.96	2.49	187	100	10.01	33.96	2.47	26.16	186	0.25
119	9.94	34.20	2.09	168	150	10.29	34.31	1.33	26.38	166	0.34
138	10.25	34.27	1.54	168	200	9.97	34.44	0.83	26.54	151	0.42
168	10.29	34.38	1.06	160	250	9.25	34.44	0.66	26.66	139	0.49
197	10.00	34.43	0.85	152	300	8.73	34.43	0.60	26.74	132	0.56
237	9.44	34.45	0.66	141	400	7.65	34.42	0.37	26.88	118	0.69
267	9.03	34.43	0.65	136	500	6.69	34.40	0.31	27.01	106	0.81
317	8.57	34.43	0.56	129	600	5.85	34.42	0.38	27.14	94	0.91
381	7.84	34.42	0.40	120							
480	6.88	34.39	0.28	109							
570	6.04	34.42	0.43	96							
646	5.64	34.43	0.25	90							

130.40 ORCA; June 7, 1959; 2205 GCT; 26°08'N, 114°03.5'W; sounding, 1050 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 19°.

1	19.58	34.14	5.04	370	0	(19.58)	(34.14)	(5.04)	(24.23)	(370)	(0.00)
11	19.55	34.11	5.00	371	10	19.56	34.11	5.00	24.22	371	0.04
30	19.51	34.13	5.09	368	20	19.52	34.12	5.04	24.23	370	0.07
39	20.09	34.40	5.05	363	30	19.51	34.13	5.09	24.25	368	0.11
53	17.32	33.97	5.05	328	50	17.80	34.03	5.05	24.60	335	0.18
68	15.26	33.87	4.09	290	75	14.84	33.86	3.89	25.15	282	0.26
90	13.00	33.86	3.12	246	100	12.49	33.96	2.70	25.70	230	0.32
108	12.12	34.04	2.36	217	150	10.88	34.23	1.60	26.22	181	0.43
125	11.34	34.03	2.05	204	200	10.53	34.43	0.69	26.44	160	0.51
145	10.94	34.22	1.68	182	250	9.92	34.47	0.54	26.58	147	0.59
172	10.55	34.27	1.25	172	300	9.29	34.45	0.41	26.66	139	0.67
203	10.52	34.45	0.68	158	400	7.99	34.44	0.32	26.86	120	0.80
230	10.10	34.47	0.67	150	500	6.82	(34.39)	0.23	(26.98)	(108)	(0.92)
274	9.73	34.47	0.45	144							
324	8.88	34.43	0.40	134							
401	7.98	34.44	0.31	120							
481	7.00	34.40	0.25	110							
564	6.35	34.23r	0.22								

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

137.40

ORCA; June 6, 1959; 0525 GCT; 25°00'N, 113°22'W; sounding, 1200 fm; wind, 290°, force 5; weather, partly cloudy; sea, moderate; wire angle, 21°.

1	19.27	33.94	5.06	376	0	(19.27)	(33.94)	(5.06)	(24.16)	(376)	(0.00)
10	19.28	33.90	5.03	380	10	19.28	33.90	5.03	24.13	380	0.04
29	18.44	33.83	5.26	365	20	19.19	33.88	5.14	24.14	378	0.08
39	17.77	33.95	5.27	340	30	18.43	33.83	5.26	24.29	364	0.11
48	16.42	33.82	5.21	319	50	16.10	33.80	5.18	24.83	313	0.18
63	14.86	33.78	4.93	289	75	13.67	33.82	3.76	25.36	262	0.25
76	13.60	33.83	3.67	260	100	11.97	34.09	2.01	25.91	210	0.31
94	12.31	33.94	2.69	228	150	11.18	34.37	1.10	26.28	176	0.41
118	11.70	34.16	1.70	200	200	11.04	34.60	0.40	26.48	156	0.50
137	11.07	34.22	1.51	185	250	10.49	34.61	0.32	26.58	146	0.57
165	11.31	34.52	0.65	167	300	9.68	34.55	0.25	26.68	137	0.65
192	11.10	34.58	0.44	159	400	8.46	34.55	0.16	26.87	119	0.78
221	10.90	34.64	0.37	151	500	7.14	34.45	0.19	26.99	108	0.90
259	10.34	34.60	0.30	144							
317	9.42	34.54	0.24	134							
389	8.62	34.56	0.15	121							
462	7.52	34.47	0.19	112							
542	6.81	34.45	0.19	104							

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Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
77.50-B	VI-17	1650	35°04.0'	120°52.0'	85	300°	5	clear	very rough	11.31	33.79
77.55-B	17	1905	34°54.5'	121°13.0'	315	270°	6	clear	very rough	13.52	33.49
77.60-B	17	2150	34°44.0'	121°34.0'	1500	310°	7	clear	high	13.92	33.38
77.65-B	18	0025	34°34.0'	121°55.0'	2000+	320°	6	clear	high	14.13	33.21
77.80-B	14	1225	34°04.0'	122°57.0'	2300	330°	6	partly cloudy	high	13.72	33.58
77.85-B	14	0925	33°54.0'	123°18.0'	2200	330°	6	partly cloudy	high	14.30	33.30
77.90-B	14	0630	33°44.0'	123°38.5'	2400	320°	5	partly cloudy	very rough	14.82	33.30
80.52-B	13	0615	34°24.5'	120°36.0'	125	300°	6	fog	high	16.51	33.69
80.55-B	13	0745	34°19.0'	120°48.0'	350	300°	6	overcast	high	14.84	33.70
80.65-B	13	1325	33°59.0'	121°30.0'	1850	330°	6	overcast	high	13.38	33.68
80.70-B	13	1540	33°49.0'	121°51.0'	2000	330°	6	partly cloudy	high	13.29	33.71
80.75-B	13	1735	33°38.5'	122°11.5'	2120	320°	5	partly cloudy	very rough	14.26	33.64
80.80-B	13	2005	33°33.0'	122°31.0'	2400	320°	5	partly cloudy	very rough	14.30	33.44
80.85-B	13	2245	33°19.0'	122°53.0'	2000+	320°	5	partly cloudy	very rough	14.96	33.45
82.47-B	13	0210	34°15.0'	119°58.0'	300	270°	2	fog	slight	14.42	33.71
83.40-B	12	2245	34°14.0'	119°22.0'	12	200°	2	clear	slight	17.64	33.69
83.43-B	12	2115	34°08.0'	119°34.0'	135	100°	2	partly cloudy	slight	16.66	33.66
83.51-B	12	1650	33°52.0'	120°08.5'	55	-	1	overcast	slight	14.16	33.64
83.55-B	12	1510	33°44.0'	120°24.5'	535	300°	1	fog	moderate	13.61	33.66

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
83.65-B	VI-12	0910	33°17.0'	121°03.5'	1250	300°	3	overcast	rough	14.92	33.44
83.70-B	12	0650	33°09.0'	121°24.0'	2100	330°	4	overcast	rough	15.40	33.40
83.75-B	12	0425	33°00.0'	121°45.0'	2220	360°	4	overcast	rough	14.96	33.51
83.80-B	12	0155	32°51.5'	122°06.0'	2000+	010°	4	overcast	very rough	14.62	33.42
83.85-B	11	2325	32°42.5'	122°26.5'	2000+	010°	4	overcast	high	15.46	33.39
83.90-B	11	2055	32°34.5'	122°48.0'	2000+	300°	5	overcast	high	15.70	33.39
87.35-B	10	1355	33°50.0'	118°37.5'	300	280°	2	overcast	rough	18.02	33.68
87.40-B	10	1525	33°40.0'	118°58.5'	350	280°	2	overcast	rough	17.98	33.68
87.45-B	10	1741	33°30.0'	119°19.0'	900	270°	2	overcast	very rough	17.48	33.71
87.50-B	10	2030	33°20.0'	119°39.5'	40	270°	3	overcast	rough	12.76	33.74
87.55-B	10	2255	33°10.0'	120°00.5'	650	320°	3	clear	very rough	13.90	33.66
87.65-B	11	0420	32°49.5'	120°42.0'	2000	320°	4	clear	very rough	14.21	33.60
87.70-B	11	0640	32°39.5'	121°01.0'	2000	320°	4	clear	very rough	15.32	33.48
87.75-B	11	0851	32°29.5'	121°22.0'	2000+	320°	4	clear	very rough	15.20	33.48
87.80-B	11	1130	32°19.5'	121°43.0'	-	320°	4	partly cloudy	very rough	15.57	33.42
87.85-B	11	1355	32°09.0'	122°03.0'	2300	320°	3	cloudy	very rough	15.22	33.38
87.90-B	11	1625	31°59.0'	122°24.0'	2310	320°	4	overcast	very rough	15.78	33.40
90.50-H	19	0750	32°44.5'	119°16.5'	160	300°	3	overcast	moderate	16.30	33.71
90.65-H	18	2047	32°04.5'	120°18.0'	2050	320°	5	overcast	very rough	16.08	33.57

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
90.75-H	VI-18	1615	31°55.0'	120°58.0'	2000	350°	4	overcast	very rough	15.62	33.57
93.45-H	16	1030	32°20.0'	118°33.0'	820	340°	4	partly cloudy	rough	17.11	33.71
93.55-H	16	1615	32°00.0'	119°13.0'	900	310°	5	partly cloudy	very rough	14.63	33.58
93.65-H	17	0130	31°47.5'	119°54.5'	2000	330°	5	clear	high	15.98	33.55
93.75-P	29	1630	31°15.0'	120°34.0'	2000	340°	4	overcast	rough	16.38	33.55
93.85-P	29	0910	30°55.5'	121°15.0'	2050	340°	6	cloudy	high	16.65	33.51
97.30-P	26	2330	32°15.5'	117°08.5'	32	210°	2	cloudy	rough	17.90	33.77
97.32-P	27	0110	32°11.5'	117°16.5'	830	280°	3	cloudy	rough	17.24	33.71
97.35-P	27	0300	32°06.5'	117°27.5'	670	270°	4	cloudy	very rough	16.90	33.71
97.40-P	27	0610	31°58.0'	117°45.5'	840	300°	6	overcast	very rough	17.06	33.77
97.45-P	27	0945	31°50.0'	118°05.0'	730	300°	6	overcast	very rough	17.06	33.78
97.50-P	27	1310	31°41.5'	118°23.0'	950	300°	6	overcast	very rough	16.78	33.80
97.55-P	27	1645	31°33.5'	118°42.0'	1400	300°	6	overcast	high	15.43	33.64
97.65-P	28	0215	31°06.0'	119°30.0'	1900	320°	6	partly cloudy	very rough	16.64	33.64
97.70-P	28	0605	30°53.0'	119°51.0'	1940	320°	6	partly cloudy	very rough	16.62	33.58
97.75-P	28	0950	30°41.0'	120°10.0'	2000	300°	6	partly cloudy	very rough	16.74	33.58
97.80-P	28	1315	30°28.0'	120°32.0'	2100	300°	6	cloudy	rough	17.04	33.60

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
97.85-P	VI-28	1610	30°23.0'	120°49.5'	2200	320°	6	cloudy	very rough	16.84a)	33.57
97.90-P	28	2005	30°20.0'	121°10.5'	2200	320°	6	cloudy	very rough	16.52	33.49
100.29-B	26	1540	31°42.0'	116°43.5'	80	260°	2	cloudy	very rough	17.24	33.66
100.30-B	26	1500	31°40.5'	116°46.5'	220	260°	1	cloudy	rough	17.78	33.64
100.35-B	26	1135	31°26.5'	117°16.5'	850	270°	3	overcast	rough	17.94	33.68
100.40-B	26	0910	31°18.0'	117°33.0'	1000	280°	3	clear	rough	18.42	33.70
100.45-B	26	0640	31°09.0'	117°50.0'	800	300°	5	clear	rough	16.59	33.63
100.50-B	26	0420	31°00.0'	118°07.0'	950	320°	5	clear	rough	16.36	33.58
100.55-B	26	0205	30°49.5'	118°27.0'	1275	320°	5	clear	high	16.83	33.62
100.65-B	25	2025	30°31.0'	119°07.0'	1600	320°	6	clear	high	16.84	33.60
100.70-B	25	1745	30°21.0'	119°27.0'	-	320°	6	clear	high	16.96	33.59
100.75-B	25	1525	30°10.5'	119°47.5'	1650	320°	5	clear	very rough	16.82	33.57
100.80-B	25	1240	29°55.0'	120°02.0'	2000	320°	4	clear	rough	16.76	33.54
100.85-B	25	1005	29°46.5'	120°23.5'	2000	320°	5	cloudy	very rough	16.98	33.53
103.30-B	23	1715	31°05.0'	116°25.0'	37	320°	4	overcast	moderate	15.37	33.55
103.35-B	23	2330	30°55.5'	116°45.0'	850	320°	4	overcast	rough	17.99	33.68
103.40-B	24	0150	30°45.5'	117°05.5'	1000	320°	4	overcast	moderate	18.14	33.71

a) Mean value of 16.77 and 16.91°C.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
103.45-B	VI-24	0415	30°36.0'	117°24.0'	1170	270°	3	overcast	moderate	18.25	33.71
103.50-B	24	0625	30°25.5'	117°44.5'	1260	270°	2	overcast	moderate	17.35	33.66
103.55-B	24	0905	30°16.5'	118°05.0'	1250	300°	3	cloudy	moderate	17.61	33.62
103.65-B	24	1410	29°56.0'	118°44.5'	1600	300°	4	overcast	moderate	17.47	33.64
103.70-B	24	1630	29°46.0'	119°05.5'	1950	320°	4	overcast	moderate	16.98	33.57
103.75-B	24	1850	29°37.0'	119°24.0'	1750	320°	4	overcast	rough	17.90	33.83
103.80-B	24	2115	29°26.5'	119°44.0'	2000+	320°	5	overcast	very rough	17.54	33.70
103.85-B	24	2330	29°17.0'	120°03.5'	2000+	320°	5	overcast	very rough	18.40	33.98
103.90-B	25	0150	29°06.0'	120°23.0'	2000+	320°	5	overcast	very rough	18.55	33.97
107.32-B	23	1250	30°26.0'	116°11.0'	365	320°	4	overcast	moderate	17.70	33.64
107.35-B	23	1115	30°20.0'	116°23.0'	850	310°	4	overcast	moderate	18.02	33.66
107.40-B	23	0905	30°10.5'	116°43.5'	1350	310°	3	overcast	moderate	18.32	33.68
107.45-B	23	0640	30°00.0'	117°03.5'	1120	340°	4	overcast	moderate	18.04	33.68
107.50-B	23	0415	29°50.5'	117°23.5'	1750	320°	4	cloudy	rough	18.20	33.66
107.55-B	23	0150	29°40.5'	117°39.0'	1800	320°	4	overcast	rough	17.82	33.66
107.65-B	22	2030	29°22.0'	118°21.0'	1500	320°	3	overcast	moderate	17.69	33.66
107.70-B	22	1815	29°11.0'	118°41.0'	1450	320°	4	overcast	moderate	17.27	33.58
107.75-B	22	1515	29°03.0'	119°03.0'	2000	320°	4	overcast	moderate	17.21	33.57
107.80-B	22	1241	28°53.0'	119°22.0'	2000	320°	3	overcast	moderate	18.07	33.91

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
107.85-B	VI-22	1040	28°43.0'	119°39.0'	2000	310°	3	overcast	moderate	17.07	33.51
107.90-B	22	0820	28°32.5'	119°59.0'	2000+	300°	3	overcast	rough	18.28	33.91
110.33-B	20	2350	29°50.5'	115°52.0'	50	320°	3	partly cloudy	moderate	16.76	33.61
110.35-B	21	0055	29°46.5'	116°00.0'	700	320°	4	partly cloudy	rough	17.90	33.68
110.40-B	21	0251	29°36.5'	116°19.5'	1150	300°	4	partly cloudy	rough	18.13	33.77
110.45-B	21	0515	29°26.0'	116°40.0'	340	290°	3	clear	rough	17.58	33.60
110.50-B	21	0725	29°17.0'	116°57.0'	1950	290°	4	partly cloudy	rough	17.98	33.68
110.55-B	21	0930	29°07.0'	117°12.0'	1900	290°	4	cloudy	rough	17.78	33.62
110.65-B	21	1605	28°39.5'	117°54.5'	1750	320°	4	overcast	moderate	18.45	33.86
110.70-B	21	1815	28°36.5'	118°18.0'	1750	320°	4	cloudy	moderate	18.31	33.83
110.75-B	21	2035	28°27.0'	118°37.0'	2000	320°	3	cloudy	rough	18.33	33.80
110.80-B	21	2250	28°16.5'	118°56.5'	2000+	320°	3	overcast	rough	18.32	33.82
110.85-B	22	0105	28°07.0'	119°16.0'	2000+	320°	3	overcast	rough	18.46	33.82
113.30-O	17	1930	29°25.5'	115°21.0'	36	310°	6	partly cloudy	rough	13.68	33.69
113.35-O	17	1555	29°13.5'	115°40.0'	520	310°	6	cloudy	high	17.06	33.68
113.40-O	17	1245	29°02.0'	115°58.5'	1000+	310°	5	cloudy	very rough	17.02	33.68
113.45-O	17	0940	28°50.0'	116°17.0'	2000+	310°	5	partly cloudy	very rough	17.10	33.68
113.50-O	17	0640	28°38.0'	116°37.0'	2000+	310°	5	partly cloudy	very rough	17.80	33.80
113.55-O	17	0310	28°27.5'	116°58.0'	2000	310°	5	partly cloudy	very rough	17.90	33.81

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
113.65-O	VI-16	2030	28°09.0'	117°38.5'	2000+	310°	5	partly cloudy	very rough	17.98	33.71
113.70-O	16	1635	27°58.0'	117°59.5'	2000+	310°	6	cloudy	high	18.06	33.75
113.75-O	16	1400	27°50.0'	118°17.0'	2000+	310°	6	cloudy	high	18.28	33.77
113.80-O	16	1030	27°40.5'	118°35.0'	2000+	310°	5	partly cloudy	high	18.30	33.91
113.85-O	16	0730	27°32.0'	118°53.0'	2000+	310°	4	partly cloudy	high	18.32	33.83
113.90-O	16	0430	27°23.0'	119°09.5'	2000+	310°	5	partly cloudy	high	18.38	33.82
117.26-O	13	2140	28°56.0'	114°41.0'	42	320°	3	overcast	moderate	15.77	33.68
117.30-O	13	2350	28°47.0'	114°57.0'	50	320°	4	drizzle	rough	16.46	33.63
117.35-O	14	0240	28°38.0'	115°16.0'	104	320°	4	overcast	rough	17.28	33.67
117.40-O	14	0600	28°27.5'	115°36.0'	300	320°	3	overcast	rough	16.99	33.69
117.55-O	15	0346	27°58.5'	116°35.0'	2000+	310°	4	missing	rough	17.61	33.68
117.60-O	15	0645	27°49.0'	116°54.5'	2000+	310°	4	missing	rough	17.80	33.69
117.65-O	15	0955	27°39.5'	117°15.0'	2000+	310°	4	missing	very rough	18.70	33.88
117.70-O	15	1215	27°30.0'	117°34.0'	2000+	310°	4	partly cloudy	very rough	18.58	33.79
117.75-O	15	1530	27°20.5'	117°53.0'	2000+	310°	5	partly cloudy	very rough	18.52	33.78
117.80-O	15	1800	27°11.5'	118°13.0'	2000+	310°	4	partly cloudy	very rough	18.67	33.81
117.85-O	15	2020	27°02.5'	118°31.0'	2000+	310°	4	partly cloudy	very rough	18.61	33.79
117.90-O	15	2305	26°51.0'	118°49.0'	2000+	310°	4	partly cloudy	very rough	18.52	33.80
118.39-O	14	0730	28°18.5'	115°24.0'	155	310°	3	missing	rough	17.38	33.68

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
119.33-O	VI-4	1530	28°19.0'	114°53.0'	60	110°	3	overcast	moderate	15.69	33.62
119.33-O	13	0930	28°17.5'	114°52.0'	60	320°	3	overcast	rough	17.37	33.71
120.25-O	4	1100	28°23.0'	114°15.0'	35	060°	4	overcast	moderate	17.56	33.78
120.25-O	13	1620	28°23.0'	114°14.5'	32	320°	3	overcast	rough	17.78	33.75
120.30-O	4	1330	28°13.0'	114°34.0'	52	110°	3	overcast	moderate	17.30	33.73
120.30-O	13	1257	28°13.0'	114°34.0'	53	320°	3	overcast	rough	17.01	33.71
120.35-O	4	1750	28°03.0'	114°54.5'	47	110°	2	cloudy	moderate	16.64	33.64
120.35-O	13	0735	28°03.0'	114°54.5'	44	310°	2	partly cloudy	rough	17.06	33.78
120.40-O	4	2010	27°56.5'	115°14.0'	29	240°	3	partly cloudy	moderate	18.41	33.84
120.40-O	12	1635	27°56.5'	115°14.0'	24	310°	3	overcast	slight	17.19	33.68
120.45-O	12	1220	27°38.5'	115°32.5'	1180	310°	2	overcast	very rough	17.44	33.70
120.55-O	12	0455	27°23.0'	116°12.0'	2000+	310°	2	cloudy	very rough	18.54	33.95
120.60-O	12	0210	27°15.5'	116°29.0'	2000+	310°	2	cloudy	very rough	19.15	34.07
120.65-O	11	2330	27°04.0'	116°48.5'	2000+	310°	2	cloudy	very rough	19.25	34.00
120.70-O	11	2100	26°54.5	117°08.0'	2000+	310°	1	cloudy	rough	19.30	34.14
120.75-O	11	1838	26°45.5'	117°24.5'	2000+	310°	1	overcast	rough	18.42	33.94
120.85-O	11	1240	26°24.5'	118°04.5'	2000+	320°	2	overcast	rough	18.40	33.87
120.90-O	11	0940	26°13.0'	118°24.0'	2000+	320°	1	overcast	rough	19.22	34.23
123.37-O	10	0345	27°24.0'	114°40.0'	42	310°	6	missing	high	16.32	33.72

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.45-O	VI-10	0930	27°07.0'	115°11.5'	2000+	320°	6	missing	high	17.01	33.75
123.50-O	10	1215	26°56.0'	115°31.5'	1990	320°	4	overcast	high	16.92	33.71
123.55-O	10	1450	26°46.5'	115°50.0'	2000+	320°	3	cloudy	high	18.90	34.08
123.60-O	10	1730	26°36.0'	116°10.0'	2000	320°	2	cloudy	very rough	19.08	34.09
123.65-O	10	2015	26°26.5'	116°27.0'	2000+	320°	2	cloudy	very rough	18.98	33.95
123.70-O	10	2250	26°20.0'	116°48.0'	2000+	320°	2	overcast	very rough	19.08	33.95
127.34-O	9	2000	26°55.0'	114°06.0'	44	320°	4	missing	rough	15.22	33.79
127.40-O	9	1630	26°43.0'	114°29.0'	1550	320°	4	cloudy	very rough	17.51a)	33.78
127.45-O	9	1330	26°33.0'	114°48.5'	1700	320°	5	partly cloudy	very rough	17.59	33.78
127.50-O	9	1040	26°24.0'	115°07.0'	650	320°	5	partly cloudy	very rough	18.80	34.01
127.55-O	9	0710	26°14.0'	115°26.0'	2000+	310°	5	partly cloudy	very rough	18.99	34.03
127.60-O	9	0404	26°04.5'	115°45.0'	2000+	310°	5	partly cloudy	very rough	19.10	34.00
127.65-O	9	0130	25°53.5'	116°06.0'	2000+	310°	5	partly cloudy	high	19.49	34.14
127.70-O	8	2140	25°44.0'	116°26.0'	2000+	310°	5	partly cloudy	very rough	18.90	33.91
130.30-O	7	1630	26°28.5'	113°29.0'	44	310°	3	partly cloudy	moderate	16.97	33.63
130.35-O	7	1910	26°18.5'	113°47.0'	145	310°	3	partly cloudy	moderate	19.72	34.12
130.45-O	8	0114	26°02.5'	114°21.5'	1900	300°	5	partly cloudy	moderate	17.70	33.67

a) Alternate value, 17.03°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
130.50-O	VI-8	0435	25°52.0'	114°47.0'	2000+	310°	4	partly cloudy	rough	17.89	33.79
130.55-O	8	0735	25°44.0'	115°05.0'	2000+	310°	4	partly cloudy	rough	17.17	33.68
130.60-O	8	1010	25°31.5'	115°24.0'	2000+	310°	5	partly cloudy	very rough	17.68	33.69
130.65-O	8	1310	25°21.5'	115°43.0'	2000+	310°	5	cloudy	very rough	18.21	33.80
130.70-O	8	1600	25°11.0'	116°02.5'	2000+	310°	5	partly cloudy	very rough	19.34	34.09
133.25-O	7	0943	26°01.5'	112°44.5'	42	310°	4	clear	rough	16.40	33.80
133.30-O	7	0648	25°52.5'	113°06.0'	110	310°	4	partly cloudy	rough	16.46	33.80
133.35-O	7	0355	25°44.5'	113°26.5'	450	300°	3	cloudy	rough	19.68	34.25
133.40-O	6	2215	25°33.0'	113°47.5'	2000+	310°	3	cloudy	moderate	19.85	34.25
133.45-O	6	1932	25°25.5'	114°00.0'	1700	310°	4	cloudy	moderate	19.33	34.07
133.50-O	6	1649	25°14.5'	114°20.5'	2000+	310°	3	cloudy	moderate	19.48	34.13
134.36-O	7	0140	25°38.0'	113°24.5'	80	310°	3	partly cloudy	moderate	18.26	33.78
137.23-O	5	1955	25°34.0'	112°19.0'	42	290°	3	clear	moderate	18.45	33.99
137.30-O	6	0000	25°20.5'	112°44.5'	180	270°	4	clear	moderate	18.42	33.78
137.35-O	6	0230	25°10.0'	113°03.0'	600	270°	4	partly cloudy	moderate	19.88	33.99
137.45-O	6	0855	24°50.0'	113°41.0'	1890	300°	5	partly cloudy	very rough	19.11	33.82
137.50-O	6	1115	24°40.0'	114°00.0'	2000+	300°	4	cloudy	rough	18.60	33.82

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
50.80	ORCA; July 27, 1959; 0106 GCT; 38°42.5'N, 126°19.5'W; sounding, 2000+ fm; wind, 330°, force 7; weather, clear; sea, very high; wire angle, 35°.										
3	15.98	32.48	5.46	407	0	(15.98)	(32.48)	(5.46)	(23.84)	(407)	(0.00)
12	16.02	32.47	5.48	409	10	16.02	32.47	5.48	23.82	409	0.04
31	15.94	32.48	5.50	406	20	16.02	32.47	5.48	23.82	409	0.08
41	15.72	32.65	-	389	30	15.98	32.48	5.49	23.84	407	0.12
54	13.52	32.77	5.92	336	50	14.97	32.71	5.59	24.23	370	0.20
67	11.77	32.77	6.11	304	75	11.24	32.82	5.88	25.06	291	0.28
91	10.54	32.94	5.20	270	100	10.18	33.03	4.85	25.41	258	0.35
109	9.57	33.30	-	228	150	8.47	33.58	3.97	26.11	191	0.46
128	9.24	33.48	3.96	210	200	7.73	33.89	3.13	26.46	157	0.55
147	8.50	33.58	3.98	192	250	7.11	33.97	2.60	26.62	143	0.63
175	8.19	33.79	3.36	172	300	6.69	34.04	1.95	26.72	133	0.70
207	7.60	33.91	3.10	154	400	5.98	34.08	1.09	26.85	121	0.83
236	7.24	-	2.75		500	5.29	34.14	0.66	26.98	108	0.95
283	6.81	34.02	2.21	136	600	(5.02)	(34.26)		(27.10)	(97)	(1.06)
336	6.42	34.05	1.52	128							
420	5.81	34.09	0.99	118							
504	5.26	34.16	0.61	107							
589	5.03	34.25	0.39	98							
50.85	ORCA; July 26, 1959; 1902 GCT; 38°23.5'N, 126°49'W; sounding, 2000+ fm; wind, 300°, force 6; weather, clear; sea, high; wire angle, 32°.										
2	17.28	32.82		412	0	(17.28)	(32.82)		(23.80)	(412)	(0.00)
11	17.30	32.82		412	10	17.30	32.82		23.80	412	0.04
28	17.24	32.85		408	20	17.29	32.82		23.80	412	0.08
36	16.92	33.01		389	30	17.22	32.87		23.86	406	0.12
49	15.18	33.06		348	50	15.08	33.05		24.47	347	0.20
63	14.30	32.93		340	75	13.69	32.97		24.70	325	0.28
85	13.48	33.01		318	100	13.38	33.23		24.97	300	0.36
102	13.37	33.24		299	150	10.32	33.32		25.60	239	0.50
120	12.27	33.17		284	200	8.64	33.74		26.21	182	0.61
138	11.00	33.24		256	250	7.85	33.92		26.47	157	0.70
169	9.38	33.40		218	300	7.05	33.96		26.62	143	0.77
200	8.64	33.74		182	400	6.00	34.02		26.80	125	0.91
229	8.16	33.89		164	500	5.33	34.07		26.92	114	1.04
276	7.42	33.94		150	600	(4.73)	(34.17)		(27.07)	(100)	(1.15)
328	6.64	33.98		136							
410	5.92	34.03		124							
494	5.38	34.07		114							
580	4.82	34.14		103							
57.90	ORCA; July 25, 1959; 2104 GCT; 37°09'N, 126°04'W; sounding, 2000+ fm; wind, 330°, force 6; weather, clear; sea, high; wire angle, 15°.										
2	15.74	32.78		380	0	(15.74)	(32.78)		(24.12)	(380)	(0.00)
11	15.71	32.79		379	10	15.71	32.79		24.14	379	0.04
36	12.26	-			20	15.33	32.80		24.23	370	0.08
47	11.51	32.88		291	30	13.20	32.86		24.73	323	0.11
61	11.06	33.06		270	50	11.49	32.88		25.06	291	0.17
76	10.66	33.30		246	75	10.68	33.28		25.51	248	0.24
101	9.63	33.55		211	100	9.66	33.54		25.89	212	0.30
119	8.92	33.73		186	150	8.50	33.84		26.31	172	0.39
139	8.61	33.80		177	200	8.13	34.00		26.49	155	0.48
169	8.36	33.91		165	250	7.17	34.06		26.67	138	0.55
199	8.13	34.00		155	300	6.77	34.09		26.75	130	0.62
237	7.35	34.05		140	400	5.44	34.08		26.92	114	0.75
267	6.98	34.06		135	500	4.93	34.17		27.05	102	0.86
316	6.67	34.10		128	600	4.78					
380	5.64	34.07		118							
479	4.93	34.14		104							
569	4.92	34.31		92							
644	4.50	-									

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

ORCA; July 24, 1959; 0734 GCT; 37°47.5'N, 123°13.5'W; sounding, 46 fm; wind, 300°, force 5; weather, clear; sea, rough; wire angle, 18°. 60.55

2	12.24	33.51	5.74	258	0	(12.24)	(33.51)	(5.74)	(25.40)	(258)	(0.00)	
11	12.28	33.54	5.84	256	10	12.28	33.54	5.84	25.42	256	0.03	
30	10.59	33.73	3.93	213	20	11.90	33.62	5.51	25.55	244	0.05	
50	10.12	33.76	3.48	203	30	10.59	33.73	3.93	25.88	213	0.07	
74	9.59	33.82	2.74	190	50	10.12	33.76	3.48	25.98	203	0.12	
					75	(9.57)	(33.82)		(26.13)	(189)	(0.16)	

ORCA; July 24, 1959; 1055 GCT; 37°36.5'N, 123°35.5'W; sounding, 2000+ fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 18°. 60.60

2	15.30	33.56	5.59	314	0	(15.30)	(33.56)	(5.59)	(24.82)	(314)	(0.00)	
11	15.32	33.53	5.65	316	10	15.32	33.53	5.65	24.79	316	0.03	
30	11.92	33.60	5.27	246	20	12.93	33.56	5.46	25.31	267	0.06	
40	10.82	33.68	4.51	221	30	11.92	33.60	5.27	25.54	246	0.09	
54	10.42	33.68	4.16	214	50	10.46	33.67	4.22	25.86	215	0.13	
68	9.94	33.79	3.41	198	75	9.90	33.84	3.22	26.08	194	0.18	
92	9.29	33.84	2.81	184	100	9.00	33.83	2.69	26.22	180	0.23	
111	8.92	33.89	2.54	175	150	8.40	34.04	1.89	26.48	156	0.32	
130	8.58	33.96	2.36	164	200	7.88	34.10	1.73	26.60	144	0.39	
148	8.41	34.03	1.93	157	250	7.32	34.14	1.19	26.72	133	0.46	
175	8.26	34.14	1.65	146	300	7.07	34.17	1.07	26.78	128	0.53	
209	7.68	34.07	1.74	144	400	6.36	34.26	0.58	26.95	112	0.65	
237	7.40	34.13	1.29	135	500	5.65	34.31	0.37	27.08	100	0.76	
285	7.18	34.16	1.11	130	600	(5.27)	(34.38)		(27.17)	(90)	(0.86)	
338	6.77	34.22	0.80	120								
418	6.25	34.27	0.53	110								
503	5.61	34.31	0.36	99								
588	5.30	34.37	0.38	91								

ORCA; July 24, 1959; 1741 GCT; 37°13.5'N, 124°22.5'W; sounding, 2000+ fm; wind, 330°, force 5; weather, overcast; sea, high; wire angle, 26°. 60.70

2	14.42	33.70		286	0	(14.42)	(33.70)		(25.11)	(286)	(0.00)	
10	14.44	33.73		284	10	14.44	33.73		25.14	284	0.03	
29	12.77	33.78		248	20	14.44	33.73		25.14	284	0.06	
37	12.09	33.77		236	30	12.71	33.78		25.52	247	0.08	
50	10.14	33.77		203	50	10.14	33.77		25.98	203	0.13	
64	9.42	33.75		193	75	9.32	33.78		26.13	189	0.18	
85	9.24	33.83		184	100	8.87	33.86		26.26	176	0.22	
102	8.82	33.86		176	150	8.21	33.96		26.44	160	0.31	
119	8.50	33.95		164	200	7.73	34.05		26.60	145	0.38	
136	8.36	33.95		162	250	7.31	34.11		26.69	136	0.46	
161	8.09	33.97		157	300	6.85	34.17		26.81	125	0.52	
192	7.80	34.04		147	400	6.18	34.20		26.92	114	0.65	
218	7.55	34.07		142	500	5.61	34.26		27.04	103	0.76	
262	7.22	34.13		133								
311	6.71	34.18		122								
388	6.22	34.19		116								
469	5.76	34.25		106								
552	5.43	34.27		100								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
60.80	ORCA; July 24, 1959; 2312 GCT; 36°54'N, 125°00'W; sounding, 2000+ fm; wind, 320°, force 5; weather, clear; sea, high; wire angle, 35°.										
1	16.86	32.93		394	0	(16.86)	(32.93)		(23.98)	(394)	(0.00)
10	16.88	32.92		394	10	16.88	32.92		23.97	394	0.04
30	16.08	32.90		379	20	16.87	32.92		23.97	394	0.08
38	15.30	32.90		362	30	16.08	32.90		24.14	379	0.12
50	14.14	32.86		342	50	14.14	32.86		24.53	342	0.19
62	13.38	32.97		319	75	13.20	33.00		24.83	313	0 27
81	12.40	33.06		294	100	11.29	33.22		25.36	263	0.35
97	11.60	33.19		270	150	8.89	33.68		26.12	190	0.46
111	10.69	33.24		251	200	8.22	33.89		26.39	164	0.55
134	9.47	33.54		209	250	7.54	33.96		26.55	150	0.63
156	8.74	33.71		185	300	6.89	33.99		26.66	138	0.71
186	8.33	33.86		168	400	5.66	34.00		26.84	122	0.84
209	8.14	33.90		162	500	5.54	34.15		26.96	110	0.96
246	7.60	33.96		151							
297	6.91	33.99		139							
378	5.66	33.96		126							
459	5.71	34.11		115							
534	5.34	34.16		107							
60.90	ORCA; July 25, 1959; 1120, 0533, 0734 GCT; 36°35'N, 125°37.5'W; sounding, 2000+ fm; wind, 320°, force 6; weather, clear; sea, high; wire angle, 33°, 33°, 45°.										
2	16.68	32.95	5.40	388	0	(16.68)	(32.95)	(5.40)	(24.04)	(388)	(0.00)
11	16.7	32.97	5.41	388	10	16.7	32.97	5.41	24.04	388	0.04
34	16.59	32.95	5.40	386	20	16.7	32.97	5.41	24.04	388	0.08
42	16.12	32.97	5.47	374	30	16.7	32.97	5.40	24.05	387	0.12
55	14.06	32.95	5.82	334	50	15.59	32.97	5.57	24.30	363	0.19
69	12.42	33.08	5.58	293	75	12.35	33.15	5.58	25.11	286	0.27
90	12.21	33.28	5.65	274	100	12.09	33.34	5.64	25.30	268	0.34
107	12.00	33.37	5.59	264	150	9.84	33.54	4.13	25.86	215	0.47
124	11.73	33.36u	5.44		200	8.8	33.88	3.22	26.29	174	0.56
150	9.84	33.54	4.13	215	250	8.00	33.94	3.20	26.47	157	0.65
174	9.0 a)	33.71	3.58	189	300	6.95	33.97	2.81	26.64	141	0.73
208	8.73	33.91	3.18	170	400	5.84	34.04	1.64	26.84	122	0.86
234	8.31	33.93	3.20	163	500	5.28	34.11	0.87	26.96	111	0.98
275	7.44	33.96	3.12	149	600	5.83	34.22	0.55	27.10	97	1.10
329	6.46	33.99	2.47	134	700	4.58	34.34	0.25	27.22	86	1.20
417	5.78	34.04	1.59	121	800	4.37	34.38	0.25	27.28	80	1.28
501	5.32	34.20u	0.83		1000	3.79	34.47	0.39	27.41	68	1.45
576	4.92	34.19	0.62	100	1200	3.29	34.51	0.56	27.49	60	1.59
					1500	2.69	34.56	0.95	27.58	52	1.77
408b)	5.76	34.04	1.50	121	2000	2.03	34.62	1.68	27.68	42	2.07
499	5.16	34.11	0.84	109	2500	1.76	34.65	2.18			
681	4.61	34.32	0.26	88	3000	1.60	34.68	2.49			
820	4.32	34.40	0.25	78							
1006	3.77	34.47	0.39	67							
1239	3.20	34.54u	0.61								
1242	3.12	34.51	0.67	59							
1409	2.84	34.54	0.85	54							
1578	2.57	34.58	1.01	49							
1794	2.20	34.60	1.34	44							
1969	2.06	34.64u	1.58								
2146	1.91	34.63	1.79	40							
2326	1.84	34.67u	1.98								
2509	1.76	34.65	2.18	37							
2695	1.70	34.65	2.22	36							
2884	1.60	34.69	2.36	34							
3077	1.60	34.68	2.49	34							
3274	1.54	34.67u	2.62								

a) Temperature inferred from pressure thermometer and wire depth.

b) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

63.52

ORCA; July 22, 1959; 1608 GCT; 37°14.5'N, 122°36.5'W; sounding, 48 fm; wind, 320°, force 3; weather, drizzle; sea, rough; wire angle, 05°.

0	14.52	33.48	5.68	304							
5	14.52	33.48	5.65	304							
8	14.42	33.48	5.63	301							
11	14.19	33.48	5.64	297							
14	13.62	33.52	5.64	283							
17	12.38	33.51	5.60	261							
20	11.83	33.51	5.42	250							
23	11.42	33.47	5.22	246							
26	11.01	33.48	4.98	239							
29	10.85	33.48	4.85	236							
32	10.93	33.58	4.75	230							
35	10.75	33.60	4.64	225							
38	10.62	33.77r	4.58								
41	10.50	33.65	4.34	218							
44	10.44	33.64	4.24	217							
51	10.05	33.68	4.13	208							
61	9.92	33.77	3.58	199							
71	9.64	33.78	3.14	194							

63.60

ORCA; July 22, 1959; 1049 GCT; 37°00'N, 123°10'W; sounding, 1400 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 02°.

1	15.32	33.53	5.78	317	0	(15.32)	(33.53)	(5.78)	(24.79)	(317)	(0.00)
11	14.78	33.53	5.85	306	10	14.95	33.53	5.83	24.87	309	0.03
31	11.67	33.68	5.39	235	20	13.90	33.56	5.83	25.12	286	0.06
41	10.92	33.70	5.09	220	30	11.68	33.68	5.40	25.64	236	0.09
55	9.62	33.71	3.60	199	50	10.00	33.73	3.91	25.98	204	0.13
70	9.28	33.78	3.27	188	75	9.22	33.80	3.18	26.17	186	0.18
95	8.93	33.87	2.39	176	100	8.90	33.90	2.35	26.30	174	0.23
114	8.58	33.94	2.31	166	150	8.24	34.03	1.90	26.50	154	0.31
134	8.40	33.99	2.02	160	200	7.76	34.06	1.71	26.60	145	0.38
154	8.19	34.04	1.86	153	250	7.38	34.12	1.38	26.69	136	0.46
183	7.91	34.05	1.78	148	300	6.92	34.14	1.09	26.78	128	0.52
219	7.60	34.11	1.47	140	400	6.20	34.22	0.61	26.94	113	0.65
248	7.39	34.12	1.38	136	500	5.85	34.26	0.40	27.01	106	0.76
298	6.94	34.14	1.11	128	600	5.31	34.33	0.31	27.13	94	0.87
353	6.46	34.20	0.76	118							
438	6.08	34.23	0.52	111							
523	5.72	34.27	0.38	104							
609	5.25	34.34	0.30	93							

63.70

ORCA; July 22, 1959; 0523 GCT; 36°42'N, 123°51'W; sounding, 2000+ fm; wind, 300°, force 2; weather, drizzle; sea, rough; wire angle, 11°.

1	16.44	32.97	5.51	382	0	(16.44)	(32.97)	(5.51)	(24.10)	(382)	(0.00)
11	16.44	32.95	5.53	383	10	16.44	32.95	5.53	24.09	383	0.04
31	15.98	32.88	5.63	378	20	16.28	32.93	5.56	24.11	381	0.08
41	13.96	32.93	6.27	333	30	16.09	32.90	5.60	24.13	379	0.11
55	12.00	32.98	5.99	292	50	12.50	32.97	6.07	24.94	303	0.18
69	11.14	33.18	5.30	263	75	10.82	33.24	5.06	25.46	253	0.25
93	9.77	33.40	4.53	224	100	9.49	33.46	4.32	25.86	215	0.31
113	9.20	33.57	4.00	203	150	8.55	33.82	3.41	26.29	174	0.41
132	8.88	33.69	3.73	189	200	7.89	33.94	3.02	26.48	156	0.49
152	8.50	33.84	3.34	172	250	7.18	34.00	2.58	26.63	142	0.57
181	8.22	33.91	2.84	163	300	6.44	34.00	1.89	26.72	133	0.64
216	7.53	33.96	3.17	150	400	5.77	34.10	0.87	26.90	116	0.77
244	7.23	34.00	2.65	143	500	5.30	34.18	0.51	27.02	105	0.89
293	6.49	33.98	1.99	135	600	5.03	34.25	0.28	27.09	98	0.99
347	6.38	34.10	1.11	124							
430	5.41	34.10	0.83	113							
515	5.30	34.20	0.45	104							
601	5.02	34.25	0.27	98							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
63.80	ORCA; July 22, 1959; 0022 GCT; 36°19.5'N, 124°27'W; sounding, 2000+ fm; wind, 300°, force 2; weather, partly cloudy; sea, rough; wire angle, 11°.										
1	17.07	32.86	5.34	404	0	(17.07)	(32.86)	(5.34)	(23.88)	(404)	(0.00)
11	16.68	32.87	5.43	394	10	16.71	32.87	5.43	23.97	395	0.04
31	16.24	32.84	5.43	387	20	16.43	32.88	5.43	24.00	392	0.08
41	16.07	32.97	5.53	373	30	16.29	32.83	5.43	24.04	388	0.12
55	15.14	32.97	5.67	354	50	15.67	32.97	5.60	24.28	365	0.19
69	13.50	32.97	5.88	321	75	13.47	33.02	5.87	24.79	317	0.28
93	12.65	33.11	5.67	295	100	12.62	33.22	5.59	25.11	286	0.36
113	11.78	33.30	5.30	265	150	9.73	33.54	4.01	25.88	213	0.48
132	10.66	33.40	4.87	239	200	8.88	33.87	2.40	26.28	175	0.58
151	9.67	33.56	3.94	211	250	7.99	34.00	3.02	26.52	152	0.66
180	9.13	33.79	2.84	186	300	7.25	34.03	2.35	26.64	141	0.74
214	8.71	33.95	2.26	167	400	6.29	34.12	1.40	26.85	121	0.88
244	8.08	34.00	3.08	154	500	5.59	34.17	0.73	26.98	109	1.00
291	7.35	34.02	2.47	143	600	(5.19)	(34.27)	(0.38)	(27.10)	(98)	(1.11)
345	6.90	34.09	1.79	131							
430	5.92	34.13	1.15	116							
513	5.54	34.18	0.68	108							
599	5.20	34.27	0.38	98							
63.90	ORCA; July 21, 1959; 1903 GCT; 35°57.5'N, 125°08'W; sounding, 2000+ fm; wind, 300°, force 4; weather, cloudy; sea, high; wire angle, 20°.										
1	16.56	32.92	5.45	388	0	(16.56)	(32.92)	(5.45)	(24.04)	(388)	(0.00)
10	16.47	32.90	5.41	387	10	16.47	32.90	5.41	24.05	387	0.04
29	15.80	32.92	5.59	371	20	16.46	32.91	5.41	24.06	386	0.08
38	15.36	32.92	5.69	362	30	15.74	32.92	5.60	24.23	370	0.12
53	14.79	32.94	-	349	50	14.86	32.93		24.43	351	0.19
67	14.32	32.99	5.72	336	75	13.99	33.05	5.69	24.71	325	0.27
89	13.33	33.19	5.66	302	100	12.72	33.26	5.53	25.12	285	0.35
108	12.22	33.29	5.40	274	150	10.28	33.51	4.26	25.76	224	0.48
126	11.43	33.37	5.03	254	200	8.92	33.89	2.61	26.28	175	0.58
144	10.50	33.48	4.42	230	250	8.09	34.00	3.26	26.49	155	0.66
172	9.52	33.70	3.34	198	300	7.18	34.01	3.08	26.64	141	0.74
204	8.84	33.90	2.58	173	400	6.15	34.04	1.49	26.80	126	0.88
232	8.42	33.97	3.11	162	500	5.37	34.14	0.76	26.98	109	1.00
278	7.42	34.00	3.29	145	600	(4.88)	(34.23)		(27.10)	(98)	(1.12)
331	6.90	34.02	2.19	137							
412	6.00	34.05	1.41	123							
496	5.40	34.13	0.80	110							
581	4.96	34.21	0.52	99							
67.55	ORCA; July 20, 1959; 1647 GCT; 36°41'N, 122°30.5'W; sounding, 1200 fm; wind, calm; weather, overcast; sea, slight; wire angle, 07°.										
0	15.24	33.39	5.80	326	0	15.24	33.39	5.80	24.69	326	0.00
10	15.20	33.40	5.80	324	10	15.20	33.40	5.80	24.71	324	0.03
30	12.06	33.32	5.64	269	20	14.50	33.38	5.77	24.85	311	0.06
40	11.42	33.33	5.32	257	30	12.06	33.32	5.64	25.29	269	0.09
49	10.89	33.44	4.87	239	50	10.80	33.45	4.79	25.63	237	0.14
64	10.06	33.58	4.32	216	75	9.90	33.64	4.14	25.92	209	0.20
79	9.85	33.69	3.98	204	100	9.17	33.76	3.49	26.14	188	0.25
98	9.20	33.75	3.54	190	150	8.74	33.89	2.40	26.32	172	0.34
123	8.92	33.86	3.06	177	200	8.21	33.99	2.47	26.47	157	0.42
143	8.80	33.88	2.49	174	250	7.61	34.06	2.01	26.62	143	0.50
172	8.49	33.98	2.23	162	300	7.25	34.11	1.47	26.70	135	0.57
202	8.19	33.99	2.48	156	400	6.78	34.21	0.80	26.85	121	0.70
232	7.84	34.05	2.23	147	500	6.04	34.27	0.50	27.00	107	0.82
271	7.34	34.06	1.77	140							
331	7.14	34.14	1.28	131							
406	6.72	34.22	0.77	120							
481	6.16	34.26	0.55	109							
561	5.71	34.29	0.38	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; July 20, 1959; 1953 GCT; 36°32'N, 122°53.5'W; sounding, 1625 fm; wind, 300°, force 1; weather, overcast; sea, rough; wire angle, 06°. 67.60

1	15.37	33.53	5.87	318	0	(15.37)	(33.53)	(5.87)	(24.78)	(318)	(0.00)
11	14.64	33.53	5.78	303	10	14.67	33.53	5.79	24.93	303	0.03
31	14.22	33.53	5.55	294	20	14.44	33.53	5.65	24.98	298	0.06
41	12.84	33.53	5.43	268	30	14.24	33.53	5.56	25.02	295	0.09
51	11.08	33.58	4.69	232	50	11.35	33.57	4.84	25.62	238	0.14
65	10.04	33.62	4.10	212	75	9.69	33.69	3.72	26.01	201	0.20
81	9.22	33.70	3.41	193	100	8.78	33.83	2.91	26.26	177	0.25
100	8.78	33.83	2.91	177	150	8.39	33.99	2.21	26.44	160	0.33
125	8.61	33.95	2.80	166	200	7.89	34.03	1.81	26.56	149	0.41
144	8.46	33.98	2.37	161	250	7.17	34.06	1.79	26.68	137	0.48
174	8.13	34.00	2.01	155	300	6.80	34.11	1.31	26.77	129	0.55
204	7.86	34.04	1.79	148	400	6.30	34.19	0.70	26.90	116	0.68
234	7.36	34.04	1.88	141	500	5.67	34.24	0.40	27.02	105	0.79
273	6.97	34.09	1.54	132							
334	6.65	34.14	0.95	125							
409	6.23	34.20	0.67	115							
484	5.76	34.23	0.43	107							
564	5.34	34.29	0.31	98							

ORCA; July 20, 1959; 2323 GCT; 36°21.5'N, 123°15.5'W; sounding, 2000 fm; wind, 300°, force 1; weather, overcast; sea, moderate; wire angle, 03°. 67.65

1	14.06	33.17	5.93	318
6	13.08	33.12	5.92	310
11	12.86	33.33	5.94	283
16	11.69	33.14	5.65	276
21	11.34	33.12	5.46	271
27	11.70	33.27	5.62	266
31	11.47	33.26	5.48	263
34	11.47	33.30	5.46	260
37	11.20	33.27	-	257
40	10.97	33.24	5.12	255
43	11.61	33.43	5.33	253
46	11.94	33.57	5.49	248
49	12.00	33.68	5.28	241
52	11.78	33.67	5.20	238
55	11.70	33.66	5.18	237
61	11.00	33.60	5.39	230
66	10.83	33.64	5.04	224
71	10.53	33.68	4.67	216

ORCA; July 21, 1959; 0146 GCT; 36°12.5'N, 123°34'W; sounding, 2000+ fm; wind, 300°, force 1; weather, overcast; sea, rough; wire angle, 08°. 67.70

1	13.85	33.26	5.91	307	0	(13.85)	(33.26)	(5.91)	(24.89)	(307)	(0.00)
11	13.36	33.30	5.96	294	10	13.36	33.29	5.96	25.03	294	0.03
31	11.58	33.34	5.72	258	20	12.90	33.34	5.90	25.15	283	0.06
40	11.65	33.38	5.66	257	30	11.58	33.33	5.71	25.40	259	0.09
50	10.79	33.36	5.10	244	50	10.79	33.36	5.10	25.56	244	0.14
65	10.67	33.53	5.33	229	75	10.01	33.52	4.67	25.81	220	0.19
80	9.58	33.48	4.41	215	100	8.95	33.65	3.80	26.09	193	0.25
99	8.96	33.64	3.84	194	150	8.33	33.93	2.89	26.41	163	0.34
124	8.66	33.81	3.32	177	200	7.53	33.98	3.17	26.56	148	0.42
143	8.41	33.91	2.90	166	250	6.83	34.01	2.41	26.69	137	0.49
173	8.01	33.96	2.93	156	300	6.49	34.06	1.85	26.77	128	0.56
203	7.45	33.98	3.19	147	400	5.99	34.16	0.87	26.91	115	0.68
232	7.01	34.00	2.60	140	500	5.60	34.25	0.45	27.04	103	0.80
272	6.64	34.02	2.28	134							
331	6.36	34.11	1.33	123							
406	5.94	34.16	0.86	114							
480	5.69	34.23	0.54	106							
560	5.25	34.29	0.30	97							

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5907

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T}{}^{-5}{}_{3}$	Z	T	S	O_2	σ_t	$\delta_{T}{}^{-5}{}_{3}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

67.80 ORCA; July 21, 1959; 0747 GCT; 35°49'N, 124°11'W; sounding, 2000+ fm; wind, 300°, force 1; weather, drizzle; sea, rough; wire angle, 06°.

1	16.58	32.87	5.46	392	0	(16.58)	(32.87)	(5.46)	(24.00)	(392)	(0.00)
12	16.60	32.90	5.47	390	10	16.60	32.90	5.47	24.02	390	0.04
31	16.28	32.88	5.40	385	20	16.35	32.89	5.41	24.06	386	0.08
41	15.78	32.92	5.60	371	30	16.28	32.88	5.40	24.07	385	0.12
52	13.54	32.92	5.92	325	50	14.03	32.92	5.85	24.60	335	0.19
65	12.66	32.84	6.00	315	75	11.72	32.85	5.69	25.00	297	0.27
80	11.69	32.86	5.67	296	100	11.32	33.02	5.36	25.20	278	0.34
101	11.24	33.02	5.33	276	150	9.22	33.58	4.14	25.99	202	0.46
124	10.18	33.37	4.64	233	200	8.40	33.86	3.49	26.34	170	0.56
145	9.40	33.55	4.23	207	250	7.93	33.99	2.86	26.51	153	0.64
173	8.72	33.75	3.70	184	300	7.24	34.03	2.38	26.64	141	0.72
203	8.38	33.87	3.44	168	400	6.04	34.07	1.47	26.83	123	0.85
233	8.10	33.96	3.09	158	500	5.76	34.21	0.50	26.99	108	0.97
273	7.62	34.01	2.62	147							
331	6.78	34.04	2.15	134							
407	6.00	34.07	1.41	122							
482	5.82	34.19	0.59	111							
562	5.33	34.25	0.39	100							

67.90 ORCA; July 21, 1959; 1325 GCT; 35°24'N, 124°49'W; sounding, 2000+ fm; wind, 300°, force 3; weather, overcast; sea, high; wire angle, 09°.

1	16.23	32.84	5.47	386	0	(16.23)	(32.84)	(5.47)	(24.06)	(386)	(0.00)
11	16.27	32.84	5.43	388	10	16.25	32.84	5.44	24.05	387	0.04
31	15.66	32.86	5.54	373	20	16.10	32.85	5.47	24.10	383	0.08
41	14.70	32.84	5.72	354	30	15.79	32.86	5.52	24.18	375	0.12
56	13.24	32.81	5.95	328	50	13.45	32.81	5.94	24.63	332	0.19
71	12.24	32.84	5.90	308	75	12.13	32.86	5.84	24.93	304	0.26
95	12.34	33.17	5.51	285	100	12.70	33.31	5.43	25.17	281	0.34
115	11.22	33.26	5.09	258	150	9.48	33.58	4.20	25.95	206	0.46
135	10.14	33.43	4.48	228	200	8.57	33.91	2.73	26.35	168	0.56
156	9.30	33.63	4.13	200	250	7.84	34.04	2.69	26.57	148	0.64
184	8.70	33.82	3.26	177	300	7.51	34.10	1.54	26.66	139	0.72
219	8.36	33.98	2.22	160	400	6.60	34.17	0.92	26.84	122	0.85
249	7.86	34.04	2.70	148	500	5.94	34.24	0.50	26.98	109	0.97
298	7.52	34.09	1.60	140	600	5.32	34.33	0.34	27.13	94	1.08
353	6.95	34.13	1.23	129							
439	6.36	34.20	0.72	116							
523	5.75	34.25	0.46	105							
610	5.28	34.34	0.33	93							

70.52 ORCA; July 20, 1959; 0726 GCT; 36°07.5'N, 121°49.5'W; sounding, 400 fm; wind, 310°, force 4; weather, overcast; sea, moderate; wire angle, 11°.

1	14.83	33.74	5.93	291	0	(14.83)	(33.74)	(5.93)	(25.06)	(291)	(0.00)
11	14.84	33.73	5.89	292	10	14.84	33.73	5.88	25.05	292	0.03
31	11.56	33.73	3.74	230	20	13.90	33.73	5.24	25.25	273	0.06
41	10.78	33.75	3.20	215	30	11.68	33.73	3.80	25.68	232	0.08
51	10.54	33.79	3.05	208	50	10.56	33.79	3.06	25.93	208	0.13
66	9.94	33.85	2.82	194	75	9.74	33.87	2.52	26.14	189	0.18
81	9.68	33.89	2.33	187	100	9.51	33.95	2.19	26.24	179	0.22
100	9.51	33.95	2.19	179	150	9.16	34.08	1.79	26.40	164	0.31
125	9.32	33.98	2.11	174	200	8.81	34.14	1.53	26.50	154	0.39
145	9.20	34.06	1.84	167	250	8.41	34.20	1.30	26.60	144	0.47
174	9.00	34.12	1.66	159	300	7.69	34.24	1.10	26.75	131	0.54
204	8.76	34.14	1.51	154	400	6.68	34.25	0.69	26.90	117	0.66
233	8.56	34.17	1.38	148	500	6.16	34.26	0.48	26.97	109	0.78
273	8.12	34.23	1.21	137							
332	7.12	34.22	0.97	125							
407	6.63	34.25	0.66	116							
483	6.35	34.26	0.53	112							
562	5.75	34.27	0.36	104							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{3}^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3}^{-5} 10 cm/g	ΔD dyn. m

70.60

ORCA; July 20, 1959; 0207 GCT; 35°52.5'N, 122°22'W; sounding, 2000+ fm; wind, 310°, force 4; weather, overcast; sea, moderate; wire angle, 15°.

1	14.30	33.48	5.92	300	0	(14.30)	(33.48)	(5.92)	(24.97)	(300)	(0.00)
10	14.30	33.51	6.00	297	10	14.30	33.51	6.00	25.00	297	0.03
30	13.12	33.58	5.79	269	20	13.79	33.55	5.90	25.14	284	0.06
39	12.00	33.58	5.69	248	30	13.12	33.58	5.79	25.29	269	0.09
54	11.30	33.64	4.38	232	50	11.47	33.62	4.73	25.64	236	0.14
68	10.54	33.73	3.52	212	75	9.77	33.71	3.17	26.01	201	0.19
92	9.55	33.78	2.96	193	100	9.52	33.82	2.72	26.14	188	0.24
110	9.40	33.88	2.40	183	150	9.22	34.05	1.81	26.36	168	0.33
130	9.26	34.00	2.03	172	200	8.73	34.13	1.45	26.51	153	0.41
149	9.22	34.05	1.82	168	250	8.18	34.21	1.22	26.64	141	0.49
177	8.92	34.11	1.53	158	300	7.67	34.23	1.04	26.74	131	0.56
210	8.62	34.14	1.41	152	400	6.68	34.25	0.78	26.90	117	0.68
238	8.30	34.19	1.29	143	500	5.88	34.23	0.52	26.99	108	0.80
285	7.86	34.23	1.06	134	600	(5.21)	(34.29)	(0.27)	(27.11)	(96)	(0.91)
340	7.18	34.23	1.00	125							
422	6.51	34.25	0.69	114							
507	5.80	34.23	0.50	108							
592	5.26	34.28	0.30	98							

70.70

ORCA; July 19, 1959; 1948 GCT; 35°30'N, 123°04'W; sounding, 2000+ fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 18°.

1	15.61	33.26	5.79	342	0	(15.61)	(33.26)	(5.79)	(24.52)	(342)	(0.00)
10	15.47	33.28	5.81	338	10	15.47	33.28	5.81	24.57	338	0.03
29	14.04	33.31	5.70	307	20	14.90	33.30	5.80	24.71	324	0.07
39	12.44	33.21	5.58	284	30	13.99	33.31	5.70	24.90	306	0.10
53	11.68	33.30	5.17	264	50	11.81	33.29	5.23	25.31	267	0.16
67	10.90	33.35	4.87	246	75	11.69	33.66	4.64	25.63	237	0.22
91	10.21	33.75	3.48	205	100	9.89	33.83	2.98	26.08	194	0.27
110	9.62	33.88	2.70	186	150	9.01	33.97	2.25	26.32	171	0.36
128	9.14	33.88	2.49	179	200	8.08	34.00	2.21	26.50	154	0.45
146	9.08	33.96	2.21	172	250	7.68	34.08	1.62	26.62	143	0.52
174	8.35	33.95	3.11	162	300	7.39	34.14	1.22	26.71	134	0.60
207	8.02	34.02	1.99	152	400	6.42	34.14	0.91	26.84	122	0.73
235	7.74	34.05	1.77	146	500	5.63	34.22	0.45	27.01	106	0.85
281	7.52	34.13	1.28	137	600	(5.19)	(34.25)		(27.08)	(99)	(0.95)
334	7.10	34.14	1.16	131							
416	6.22	34.14	0.83	119							
499	5.62	34.22	0.46	106							
584	5.22	34.25	0.33	100							

70.80

ORCA; July 19, 1959; 1346 GCT; 35°09.5'N, 123°46.5'W; sounding, 2000+ fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 11°.

1	15.46	33.31	5.56	336	0	(15.46)	(33.31)	(5.56)	(24.59)	(336)	(0.00)
11	15.47	33.34	5.55	334	10	15.47	33.34	5.55	24.61	334	0.03
30	12.71	33.31	5.53	281	20	15.09	33.34	5.55	24.69	326	0.07
40	11.70	33.21	5.25	270	30	12.71	33.31	5.53	25.16	281	0.10
55	11.30	33.45	5.20	245	50	11.40	33.38	5.21	25.46	253	0.15
70	10.96	33.52	5.07	234	75	10.70	33.52	4.98	25.70	230	0.21
94	10.09	33.58	4.63	216	100	9.62	33.65	4.17	25.98	204	0.27
114	9.14	33.75	3.37	189	150	8.71	33.89	2.25	26.33	171	0.36
134	8.87	33.82	2.96	179	200	8.02	34.00	2.39	26.51	153	0.44
154	8.68	33.92	2.00	169	250	7.47	34.04	1.86	26.62	142	0.52
183	8.24	33.98	2.48	158	300	7.15	34.13	1.27	26.74	131	0.59
218	7.80	34.03	2.27	148	400	6.21	34.18	0.70	26.90	116	0.72
247	7.49	34.04	1.93	143	500	5.67	34.25	0.42	27.02	104	0.83
296	7.18	34.13	1.32	132	600	5.05	34.28	0.30	27.12	95	0.94
352	6.58	34.14	0.97	124							
436	6.00	34.22	0.57	111							
521	5.56	34.25	0.38	103							
606	5.00	34.28	0.30	95							

SIO

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

70.90 ORCA; July 19, 1959; 0757 GCT; 34°53.5'N, 124°29.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, overcast; sea, rough; wire angle, 24°.

1	14.62	32.97	5.88	343	0	(14.62)	(32.97)	(5.88)	(24.51)	(343)	(0.00)
8	14.26	32.97	5.95	336	10	14.00	33.00	5.95	24.66	329	0.03
28	13.38	33.15	5.86	305	20	13.50	33.12	5.88	24.86	310	0.07
37	12.95	33.19	5.79	294	30	13.37	33.18	5.84	24.94	303	0.10
50	12.46	33.22	5.67	283	50	12.46	33.22	5.67	25.14	283	0.15
63	11.35	33.30	5.33	258	75	10.92	33.31	5.32	25.50	249	0.22
85	11.22	33.49	5.31	241	100	10.00	33.51	4.27	25.81	220	0.28
102	9.90	33.53	4.03	216	150	8.83	33.84	3.07	26.25	178	0.38
120	9.52	33.68	3.18	199	200	8.26	33.94	4.10	26.43	161	0.47
137	8.88	33.76	3.35	184	250	7.44	33.98	3.46	26.57	148	0.54
162	8.75	33.86	2.88	174	300	6.78	34.00	2.45	26.69	136	0.62
192	8.33	33.94	4.15	162	400	5.62	34.02	1.47	26.85	121	0.75
219	8.00	33.94	3.75	158	500	5.08	34.12	0.80	26.99	108	0.87
262	7.24	33.98	3.35	144							
310	6.64	34.00	2.32	135							
387	5.77	34.02	1.55	122							
464	5.14	34.07	1.01	112							
547	5.04	34.18	0.51	103							

73.55 ORCA; July 17, 1959; 2020 GCT; 35°28.5'N, 121°35.5'W; sounding, 550 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 06°.

1	14.70	33.65	6.42	295	0	(14.70)	(33.65)	(6.42)	(25.02)	(295)	(0.00)
11	13.85	33.57	6.01	284	10	13.85	33.57	6.02	25.13	284	0.03
31	12.88	33.62	5.58	261	20	13.10	33.60	5.67	25.31	267	0.06
41	12.25	33.66	5.16	247	30	12.92	33.62	5.59	25.36	262	0.08
56	11.54	33.64	4.55	236	50	11.79	33.65	4.76	25.60	239	0.13
71	11.15	33.73	3.65	222	75	11.07	33.76	3.47	25.82	218	0.19
95	9.76	33.83	2.75	192	100	9.69	33.84	2.72	26.12	190	0.24
115	9.50	33.86	2.51	186	150	9.04	34.06	1.95	26.39	164	0.33
134	9.24	34.00	2.15	171	200	8.34	34.14	1.58	26.58	147	0.41
155	8.98	34.07	1.89	162	250	8.13	34.22	1.21	26.67	138	0.48
184	8.44	34.11	1.74	151	300	7.44	34.25	1.12	26.79	127	0.55
218	8.26	34.18	1.39	143	400	6.54	34.25	0.60	26.92	114	0.68
248	8.13	34.22	1.22	138	500	5.97	34.27	0.50	27.00	107	0.79
298	7.45	34.25	1.13	127	600	5.49	34.31	0.32	27.09	98	0.90
352	6.92	34.24	0.78	120							
437	6.31	34.26	0.54	111							
522	5.86	34.27	0.48	105							
607	5.45	34.32	0.30	97							

73.60 ORCA; July 17, 1959; 2333 GCT; 35°17'N, 121°57'W; sounding, 1300 fm; wind, 310°, force 3; weather, overcast; sea, very rough; wire angle, 05°.

1	14.47	33.59	6.25	295	0	(14.47)	(33.59)	(6.25)	(25.02)	(295)	(0.00)
11	14.07	33.59	6.26	287	10	14.11	33.59	6.26	25.10	287	0.03
31	13.14	33.64	5.88	265	20	13.51	33.62	6.17	25.24	274	0.06
41	12.54	33.60	5.34	257	30	13.21	33.64	5.95	25.32	266	0.08
56	11.04	33.58	4.44	232	50	12.22	33.59	5.05	25.47	252	0.14
71	10.26	33.58	4.31	219	75	10.00	33.59	4.22	25.88	213	0.19
95	9.34	33.71	3.47	194	100	9.20	33.74	3.26	26.12	190	0.25
115	9.14	33.90	2.65	178	150	8.99	34.05	1.83	26.40	164	0.33
135	9.00	34.00	2.04	168	200	8.62	34.20	1.41	26.58	147	0.41
154	8.98	34.07	1.77	162	250	8.17	34.18	1.18	26.63	142	0.49
184	8.71	34.18	1.49	150	300	7.99	34.27	0.98	26.72	133	0.56
219	8.51	34.20	1.34	145	400	6.64	34.22	0.86	26.88	118	0.69
249	8.18	34.18	1.18	142	500	6.04	34.31	0.46	27.03	104	0.80
299	8.00	34.27	0.98	133	600	5.59	34.34	0.36	27.11	96	0.91
353	7.12	34.22	1.06	125							
438	6.32	34.23	0.62	114							
523	5.94	34.34	0.42	101							
608	5.54	34.34	0.35	96							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm/g	ΔD dyn. m

73.70

ORCA; July 18, 1959; 0535 GCT; 34°54.5'N, 122°39.5'W; sounding, 2000 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 07°.

0	15.40	33.62	5.73	312	0	15.40	33.62	5.73	24.84	312	0.00
10	15.18	33.66	5.78	304	10	15.18	33.66	5.78	24.92	304	0.03
30	14.46	33.62	5.70	292	20	14.81	33.64	5.76	24.98	298	0.06
40	13.59	33.61	5.56	276	30	14.46	33.62	5.70	25.04	292	0.09
50	12.64	33.71	4.49	250	50	12.64	33.71	4.49	25.49	250	0.14
64	10.45	33.71	3.93	212	75	10.02	33.80	3.11	26.04	198	0.20
79	9.84	33.82	2.83	194	100	8.92	33.81		26.23	180	0.25
99	8.93	33.81	-	180	150	8.37	34.00	2.23	26.46	158	0.33
123	8.73	33.94	2.37	168	200	7.74	34.07	1.79	26.60	145	0.41
143	8.46	33.98	2.32	162	250	7.08	34.11	1.59	26.73	132	0.48
172	8.14	34.05	1.93	151	300	6.84	34.17	1.10	26.80	125	0.55
203	7.68	34.07	1.76	144	400	6.03	34.18	0.76	26.92	114	0.67
232	7.21	34.09	1.74	136	500	5.52	34.24	0.40	27.04	103	0.78
272	6.98	34.14	1.32	129							
332	6.68	34.18	0.95	122							
405	6.01	34.18	0.75	114							
481	5.62	34.23	0.44	105							
562	5.20	34.29	0.29	96							

73.80

ORCA; July 18, 1959; 1139 GCT; 34°32'N, 123°23'W; sounding, 2000+ fm; wind, 300°, force 2; weather, overcast; sea, rough; wire angle, 15°.

1	16.58	33.08	5.48	376	0	(16.58)	(33.08)	(5.48)	(24.17)	(376)	(0.00)
11	16.61	33.12	5.42	374	10	16.60	33.12	5.43	24.18	375	0.04
29	16.00	33.08	5.56	364	20	16.58	33.12	5.42	24.19	374	0.07
39	15.02	33.06	5.74	345	30	15.93	33.08	5.57	24.31	362	0.11
48	14.36	33.14	5.70	325	50	14.29	33.15	5.70	24.73	323	0.18
62	13.94	33.40	5.61	298	75	13.28	33.41	5.48	25.13	284	0.26
76	13.20	33.41	5.47	283	100	12.31	33.51	5.17	25.39	259	0.33
94	12.52	33.51	5.23	263	150	9.78	33.75	3.07	26.04	198	0.44
117	10.78	33.47	4.57	235	200	9.12	34.00	2.11	26.34	170	0.53
135	10.16	33.68	3.58	210	250	8.57	34.12	1.75	26.52	152	0.62
163	9.50	33.80	2.75	190	300	8.15	34.22	1.28	26.66	139	0.69
191	9.28	33.98	2.16	174	400	7.10	34.25	0.80	26.84	122	0.83
219	8.72	34.02	2.09	162	500	6.05	34.26	0.49	26.98	109	0.95
256	8.55	34.14	1.66	150							
314	8.00	34.24	1.18	135							
386	7.29	34.26	0.85	124							
458	6.42	34.25	0.60	114							
538	5.79	34.26	0.40	105							

73.90

ORCA; July 18, 1959; 1741 GCT; 34°09'N, 124°07'W; sounding, 2000+ fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 12°.

1	16.67	33.04	5.46	382	0	(16.67)	(33.04)	(5.46)	(24.10)	(382)	(0.00)
11	16.63	33.03	5.48	381	10	16.63	33.03	5.48	24.11	381	0.04
30	16.26	33.04	5.56	372	20	16.50	33.03	5.50	24.14	378	0.08
40	16.04	33.07	5.61	366	30	16.26	33.04	5.56	24.21	372	0.11
55	15.30	33.01	5.75	354	50	15.83	33.06	5.65	24.31	362	0.19
69	13.28	32.90	5.96	322	75	12.95	32.93	5.88	24.83	313	0.27
94	12.51	33.15	5.48	289	100	13.35	33.43	5.41	25.13	285	0.35
113	12.48	33.46	5.25	266	150	9.62	33.58	4.25	25.93	208	0.47
132	11.23	33.53	4.65	238	200	8.84	33.91	3.80	26.31	172	0.57
152	9.46	33.59	4.23	205	250	7.82	33.98	3.78	26.52	152	0.65
181	9.36	33.82	2.90	186	300	7.08	33.96	2.99	26.61	144	0.73
215	8.42	33.93	4.15	165	400	5.82	34.02	1.74	26.83	123	0.87
244	7.91	33.98	3.85	153	500	5.22	34.14	0.87	26.99	108	0.99
293	7.18	33.96	3.08	145	600	4.87	34.25	0.47	27.12	95	1.10
347	6.42	33.98	2.37	134							
431	5.54	34.04	1.44	118							
515	5.16	34.16	0.78	105							
602	4.86	34.25	0.46	95							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

77.55 ORCA; July 17, 1959; 0948 GCT; 34°49.5'N, 121°13'W; sounding, 300 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 09°.

1	15.19	33.60	6.04	308	0	(15.19)	(33.60)	(6.04)	(24.88)	(308)	(0.00)
11	15.20	33.77	6.08	296	10	15.20	33.75	6.08	24.99	298	0.03
30	13.26	33.68	4.28	264	20	15.16	33.77	6.07	25.02	295	0.06
50	10.67	33.77	3.07	211	30	13.26	33.68	4.28	25.34	264	0.09
74	9.63	33.88	2.42	186	50	10.67	33.77	3.07	25.90	211	0.14
99	9.60	33.89	2.42	185	75	9.62	33.88	2.42	26.16	186	0.18
123	9.50	33.91	2.28	182	100	9.60	33.89	2.42	26.18	185	0.23
162	9.13	34.03	1.85	167	150	9.27	33.98	2.02	26.30	173	0.32
202	8.58	34.16	1.47	149	200	8.61	34.15	1.49	26.54	150	0.41
251	8.34	34.18	1.18	145	250	8.36	34.18	1.18	26.60	145	0.48
301	8.04	34.22	1.06	137	300	8.06	34.22	1.07	26.67	138	0.55
406	7.42	34.26	0.79	126	400	7.46	34.26	0.80	26.80	126	0.69

77.60 ORCA; July 17, 1959; 0623 GCT; 34°41.5'N, 121°34'W; sounding, 500 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 18°.

1	15.92	33.71	5.78	316	0	(15.92)	(33.71)	(5.78)	(24.80)	(316)	(0.00)
11	15.78	33.69	5.77	314	10	15.79	33.69	5.77	24.82	314	0.03
29	14.04	33.65	5.38	282	20	15.58	33.68	5.74	24.85	311	0.06
39	13.07	33.58	5.09	268	30	13.70	33.62	5.28	25.21	277	0.09
52	11.02	33.57	4.36	232	50	11.03	33.57	4.37	25.68	232	0.14
68	9.92	33.68	3.20	206	75	9.19	33.69	2.98	26.08	194	0.20
92	9.15	33.80	2.82	185	100	8.68	33.82	2.66	26.27	176	0.24
110	8.72	33.89	2.55	171	150	8.73	34.13	1.86	26.51	153	0.33
129	8.88	33.98	1.99	168	200	8.55	34.18	1.27	26.56	148	0.40
148	8.72	34.13	1.88	153	250	8.02	34.22	1.08	26.69	136	0.48
176	8.82	34.16	1.35	153	300	7.54	34.24	0.90	26.78	128	0.54
209	8.42	34.18	1.24	146	400	6.64	34.24	0.62	26.90	116	0.67
236	8.16	34.21	1.12	139	500	5.93	34.28	0.42	27.02	105	0.79
284	7.68	34.24	0.98	131	600	(5.57)	(34.32)		(27.09)	(98)	(0.89)
336	7.22	34.25	0.76	124							
420	6.42	34.24	0.59	114							
504	5.90	34.28	0.40	105							
589	5.60	34.32	0.36	98							

77.70 ORCA; July 17, 1959; 0008 GCT; 34°24'N, 122°16.5'W; sounding, 2200 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 18°.

1	15.30	33.46	5.41	322	0	(15.30)	(33.46)	(5.41)	(24.74)	(322)	(0.00)
10	14.88	33.43	5.72	315	10	14.88	33.43	5.72	24.81	315	0.03
30	14.24	33.41	5.63	303	20	14.49	33.42	5.70	24.88	308	0.06
40	13.77	33.44	5.53	292	30	14.24	33.41	5.63	24.94	303	0.09
48	12.72	33.31	5.53	281	50	12.70	33.31	5.53	25.16	281	0.15
63	12.14	33.53	5.33	255	75	11.04	33.55	4.99	25.66	234	0.22
77	10.89	33.55	4.94	231	100	9.12	33.54	4.10	25.98	204	0.27
96	9.62	33.52	4.10	213	150	8.60	33.90	3.45	26.34	169	0.37
118	8.98	33.72	4.11	188	200	7.90	34.04	2.36	26.56	148	0.45
137	8.68	33.84	3.97	175	250	7.03	34.04	2.25	26.68	137	0.52
165	8.52	33.98	2.39	162	300	6.60	34.10	1.56	26.79	127	0.59
184	8.00	34.04	2.38	150	400	5.86	34.16	0.86	26.93	114	0.71
221	7.58	34.05	2.26	144	500	5.59	34.22	0.45	27.01	106	0.83
258	6.86	34.04	2.26	134							
316	6.54	34.11	1.34	125							
387	5.92	34.14	0.99	116							
460	5.72	34.19	0.55	109							
541	5.32	34.23	0.39	101							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m	

ORCA; July 16, 1959; 1807 GCT; 34°00'N, 122°57'W; sounding, 2200 fm; wind, 310°, force 2; weather, overcast; sea, rough; wire angle, 00°. 77.80

1	15.52	33.11	5.69	351	0	(15.52)	(33.11)	(5.69)	(24.43)	(351)	(0.00)	
12	15.23	33.28	5.79	333	10	15.25	33.28	5.77	24.62	334	0.03	
32	14.17	33.10	5.85	324	20	14.41	33.13	5.83	24.68	327	0.07	
42	13.36	33.07	5.79	311	30	14.19	33.11	5.84	24.70	325	0.10	
52	12.96	33.12	5.51	300	50	13.06	33.10	5.62	24.94	303	0.16	
67	12.26	33.28	5.38	275	75	11.72	33.31	5.24	25.36	263	0.23	
82	11.18	33.32	5.09	253	100	9.98	33.43	4.50	25.76	225	0.30	
101	9.92	33.44	4.47	224	150	9.04	33.90	2.50	26.27	176	0.40	
127	9.16	33.75	3.37	188	200	8.70	34.12	1.83	26.49	155	0.48	
147	9.06	33.88	2.63	178	250	8.04	34.10	1.56	26.58	146	0.56	
177	9.03	34.05	1.89	165	300	7.44	34.11	1.44	26.67	138	0.63	
208	8.56	34.12	1.82	152	400	6.78	34.21	0.75	26.85	121	0.76	
237	8.20	34.11	1.60	148	500	6.07	34.29	0.43	27.01	106	0.88	
278	7.64	34.08	1.55	142								
338	7.22	34.18	1.05	129								
412	6.65	34.21	0.69	120								
488	6.12	34.27	0.45	108								
569	5.68	34.33	0.33	98								

ORCA; July 16, 1959; 1152 GCT; 33°40'N, 123°39'W; sounding, 2400+ fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 04°. 77.90

1	16.36	33.48	5.53	342	0	(16.36)	(33.48)	(5.53)	(24.52)	(342)	(0.00)	
11	16.38	33.48	5.57	343	10	16.38	33.48	5.55	24.51	343	0.03	
32	15.91	33.56	5.48	327	20	16.38	33.48	5.57	24.51	343	0.07	
42	13.74	33.58	5.37	281	30	16.08	33.54	5.52	24.63	332	0.10	
57	12.48	33.64	4.60	253	50	12.93	33.62	4.84	25.37	262	0.16	
71	11.32	33.58	4.58	236	75	10.94	33.59	4.38	25.71	229	0.22	
96	9.92	33.71	3.07	204	100	9.86	33.74	2.87	26.02	200	0.28	
115	9.48	33.82	2.64	189	150	8.86	33.96	2.31	26.34	169	0.37	
135	9.06	33.95	2.47	173	200	8.34	34.10	1.86	26.54	151	0.45	
154	8.80	33.96	2.22	168	250	7.42	34.08	1.77	26.66	139	0.52	
185	8.54	34.07	1.88	156	300	6.43	34.04	1.97	26.76	129	0.59	
219	7.96	34.09	1.87	146	400	6.16	34.19	0.77	26.91	115	0.72	
249	7.42	34.08	1.77	139	500	5.47	34.25	0.51	27.05	102	0.83	
298	6.44	34.04	1.98	130	600	4.91	34.27	0.36	27.13	94	0.94	
353	6.40	34.14	0.95	122								
437	5.83	34.22	0.62	109								
522	5.40	34.26	0.46	100								
607	4.84	34.27	0.35	94								

ORCA; July 12, 1959; 0518 GCT; 34°25'N, 120°35.5'W; sounding, 100 fm; wind, 310°, force 3; weather, clear; sea, rough; wire angle, 00°. 80.52

1	17.50	33.71	6.14	351	0	(17.51)	(33.71)	(6.14)	(24.43)	(351)	(0.00)	
11	14.13	33.71	4.88	279	10	14.40	33.71	5.03	25.13	284	0.03	
30	13.10	33.67	4.29	262	20	13.41	33.68	4.45	25.31	267	0.06	
50	12.14	33.72	3.68	241	30	13.10	33.67	4.29	25.37	262	0.09	
75	10.94	33.76	3.00	217	50	12.14	33.72	3.68	25.59	241	0.14	
99	9.67	33.96	2.40	181	75	10.94	33.76	3.00	25.84	217	0.19	
124	9.56	33.98	2.04	178	100	9.66	33.96	2.39	26.22	180	0.24	
155	9.44	34.04	1.94	172	150	9.47	34.03	1.94	26.30	173	0.33	

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
80.55	ORCA; July 12, 1959; 0743 GCT; 34°18.5'N, 120°47.5'W; sounding, 410 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 20°.										
0	18.50	33.78	5.94	370	0	18.50	33.78	5.94	24.23	370	0.00
10	18.34	33.75	5.99	368	10	18.34	33.75	5.99	24.25	368	0.04
29	12.40	33.67	4.40	249	20	14.36	33.68	5.05	25.12	286	0.07
39	11.66	33.69	3.92	234	30	12.33	33.67	4.36	25.51	248	0.10
53	10.68	33.75	3.24	213	50	10.92	33.73	3.39	25.82	218	0.14
68	9.96	33.82	3.00	196	75	9.80	33.85	2.96	26.11	191	0.19
91	9.50	33.96	2.63	178	100	9.36	33.99	2.45	26.29	174	0.24
110	9.21	34.02	2.24	170	150	8.97	34.13	1.80	26.46	158	0.32
129	8.99	34.09	1.89	161	200	8.94	34.19	1.63	26.52	153	0.40
149	8.98	34.13	1.82	158	250	8.47	34.26	1.21	26.64	141	0.48
176	8.97	34.20	1.72	152	300	8.17	34.26	1.18	26.69	136	0.55
209	8.90	34.18	1.58	153	400	7.49	34.29	0.87	26.81	125	0.68
238	8.59	34.23	1.25	144	500	6.49	34.31	0.48	26.96	110	0.80
286	8.22	34.26	1.19	137	600	(5.72)	(34.33)	(0.34)	(27.08)	(99)	(0.92)
339	8.02	-	0.98								
422	7.28	34.29	0.75	122							
506	6.44	34.31	0.46	109							
593	5.78	34.33	0.35	100							
80.60	ORCA; July 12, 1959; 1117 GCT; 34°08.5'N, 121°09.5'W; sounding, 1000+ fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 19°.										
1	16.08	33.69	5.88	321	0	(16.08)	(33.69)	(5.88)	(24.75)	(321)	(0.00)
11	16.11	33.75	5.87	317	10	16.11	33.75	5.87	24.79	317	0.03
34	13.00	33.63	5.05	263	20	15.48	33.72	5.82	24.90	306	0.06
43	12.15	33.76	4.05	238	30	14.99	33.69	5.72	24.99	298	0.09
57	10.16	33.77	3.14	202	50	10.46	33.77	3.28	25.94	208	0.14
71	9.88	33.87	2.67	191	75	9.84	33.90	2.59	26.14	188	0.19
96	9.14	34.03	2.15	167	100	9.03	34.04	2.11	26.38	165	0.24
114	8.78	34.07	2.00	159	150	8.15	34.09	1.92	26.56	148	0.32
132	8.52	34.13	1.74	150	200	7.65	34.14	1.69	26.67	138	0.39
161	7.98	34.07	1.93	147	250	7.27	34.17	1.25	26.75	131	0.46
189	7.74	34.12	1.76	140	300	7.12	34.27	0.79	26.85	121	0.52
226	7.39	34.14	1.50	134	400	6.39	34.30	0.52	26.98	109	0.64
254	7.26	34.18	1.16	130	500	5.96	34.32	0.36	27.05	102	0.75
302	7.11	34.27	0.78	121	600	5.49	34.35	0.33	27.12	95	0.86
364	6.61	34.30	0.59	112							
462	6.10	34.31	0.41	105							
551	5.71	34.34	0.32	98							
625	5.39	34.36	0.33	93							
80.70	ORCA; July 12, 1959; 1724 GCT; 33°50'N, 121°55'W; sounding, 1500 fm; wind, 310°, force 4; weather, overcast; sea, very rough; wire angle, 25°.										
1	14.71	33.50	5.96	306	0	(14.70)	(33.50)	(5.96)	(24.90)	(306)	(0.00)
11	14.73	33.49	5.99	307	10	14.72	33.49	5.99	24.89	307	0.03
29	13.02	33.31	5.72	287	20	14.73	33.49	5.99	24.89	307	0.06
38	12.08	33.22	5.43	276	30	12.93	33.30	5.70	25.11	286	0.09
52	11.61	33.35	5.28	258	50	11.65	33.33	5.29	25.38	260	0.15
65	11.36	33.53	5.24	240	75	10.68	33.58	5.05	25.74	226	0.21
87	9.22	33.58	4.20	202	100	9.13	33.71	4.06	26.11	191	0.26
106	9.12	33.77	3.92	187	150	9.03	34.06	2.12	26.40	164	0.35
123	9.19	33.92	2.45	177	200	8.20	34.09	1.83	26.55	150	0.43
138	9.18	34.00	2.26	170	250	7.46	34.09	1.81	26.66	140	0.50
165	8.76	34.09	1.91	157	300	6.98	34.10	1.35	26.74	132	0.57
195	8.28	34.09	1.82	151	400	5.89	34.13	1.00	26.90	116	0.70
222	7.89	34.08	1.85	146	500	5.70	34.24	0.40	27.02	105	0.82
266	7.25	34.09	1.76	136							
316	6.84	34.11	1.09	129							
396	5.92	34.13	1.02	116							
478	5.76	34.22	0.46	108							
564	5.47	34.33	0.35	96							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; July 13, 1959; 0028 GCT; 33°30.5'N, 122°35'W; sounding, 2000 fm; wind, 340°, force 7; weather, cloudy; sea, very rough; wire angle, 25°. 80.80

4	16.87	33.46	5.52	356	0	16.9	(33.46)	(5.52)	(24.38)	(356)	(0.00)
14	16.92	33.47	5.52	356	10	16.89	33.46	5.52	24.38	356	0.04
37	14.31	33.33	6.04	310	20	16.91	33.47	5.52	24.38	356	0.07
46	13.20	33.30	5.70	291	30	16.82	33.47	5.56	24.40	354	0.11
59	11.67	33.18	5.22	271	50	12.31	33.22	5.43	25.17	281	0.17
72	11.36	33.33	5.01	255	75	11.37	33.37	4.96	25.46	253	0.24
95	10.06	33.57	3.78	216	100	10.06	33.66	3.52	25.91	210	0.30
113	9.50	33.74	3.14	195	150	8.64	33.89	2.79	26.32	171	0.39
130	8.90	33.80	3.15	181	200	8.06	34.04	2.18	26.54	151	0.47
157	8.58	33.92	2.68	168	250	7.51	34.12	1.60	26.67	138	0.55
183	8.22	34.01	2.37	156	300	6.97	34.16	1.17	26.79	127	0.62
218	7.90	34.05	2.04	148	400	6.25	34.23	0.76	26.94	113	0.74
245	7.58	34.11	1.68	139	500	5.72	34.27	0.48	27.04	103	0.85
292	7.04	34.16	1.24	128	600	5.20	34.32	0.34	27.14	94	0.96
352	6.53	34.20	0.88	118							
448	6.00	34.25	0.65	108							
534	5.49	34.29	0.38	99							
607	5.18	34.33	0.34	93							

ORCA; July 16, 1959; 0625, 0307 GCT; 33°10'N, 123°15'W; sounding, 2000+ fm; wind, 310°, force 3; weather, overcast; sea, very rough; wire angle, 10°, 15°. 80.90

1	16.42	33.60	5.75	335	0	(16.42)	(33.60)	(5.75)	(24.60)	(335)	(0.00)
11	16.40	33.60	5.79	335	10	16.40	33.60	5.79	24.60	335	0.03
31	14.39	33.73	5.76	283	20	16.20	33.60	5.79	24.65	330	0.07
42	13.34	33.68	5.10	266	30	14.41	33.73	5.77	25.14	283	0.10
55	11.35	33.62	4.20	234	50	11.73	33.62	4.35	25.59	240	0.15
71	10.36	33.71	3.45	210	75	10.20	33.74	3.30	25.95	206	0.21
95	9.43	33.80	2.77	190	100	9.34	33.80	2.70	26.16	187	0.26
115	9.32	33.88	2.44	182	150	9.04	34.05	1.87	26.39	165	0.34
134	9.20	34.00	1.91	171	200	7.71	34.00	3.12	26.56	149	0.42
154	8.99	34.05	1.88	164	250	7.27	34.06	2.05	26.66	139	0.50
184	8.17	34.04	2.56	152	300	6.68	34.09	1.40	26.77	128	0.57
218	7.40	33.99	3.31	146	400	5.90	34.16	0.84	26.92	114	0.69
246	7.30	34.05	2.12	140	500	5.30	34.21	0.46	27.04	103	0.81
296	6.72	34.09	1.41	129	600	4.89	34.29	0.21	27.15	93	0.91
350	5.96	34.10	1.27	119	700	4.58	34.32	0.31	27.21	87	1.01
436	5.79	34.20	0.61	110	800	4.33	34.39	0.19	27.29	79	1.10
522	5.19	34.25	0.41	99	1000	3.79	34.44	0.48	27.39	70	1.26
607	4.88	34.33	0.29	90	1200	3.27	34.53	0.72	27.51	58	1.41
					1500	2.74	34.57	1.11	27.59	51	1.60
385a)	6.03	34.13	0.79	118	2000	2.07	34.61	1.71	27.67	43	1.88
484	5.43	34.20	0.27	106	2500	1.78	34.64	2.28			
581	4.94	34.27	0.19	94	3000	1.62	34.65	2.58			
680	4.62	34.31	0.12	88							
777	4.40	34.38	0.15	81							
974	3.86	34.44	0.44	71							
1171	3.34	34.52	0.66	60							
1367	2.94	34.56	0.95	54							
1562	2.64	34.58	1.17	50							
1760	2.32	34.60	1.41	46							
1956	2.10	34.60	1.65	44							
2154	1.98	34.63	1.86	41							
2350	1.86	34.63	2.02	40							
2547	1.76	34.65	2.35	38							
2744	1.68	34.65	2.45	37							
2942	1.62	34.65	2.51	37							
3042	1.62	34.66	2.65	36							
3144	1.56	34.65	2.75	36							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

82.44 ORCA; July 11, 1959; 1625 GCT; 34°17'N, 119°44'W; sounding, 100 fm; wind, 040°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

1	20.42	33.72	5.40	421	0	(20.42)	(33.72)	(5.40)	(23.69)	(421)	(0.00)
11	18.76	33.71	5.53	381	10	19.50	33.72	5.47	23.94	398	0.04
31	12.84	33.57	4.57	264	20	17.00	33.66	5.38	24.51	343	0.08
50	11.48	33.64	3.54	235	30	13.70	33.58	4.80	25.18	280	0.11
75	10.62	33.66	3.45	218	50	11.48	33.64	3.54	25.65	235	0.16
99	10.08	33.77	3.13	202	75	10.62	33.66	3.45	25.82	218	0.22
124	9.70	33.87	2.81	188	100	10.07	33.77	3.12	26.00	201	0.27
155	9.47	33.96	2.30	178	150	9.49	33.95	2.35	26.24	179	0.37

82.47 ORCA; July 10, 1959; 2327 GCT; 34°15'N, 119°58'W; sounding, 300 fm; wind, 350°, force 2; weather, cloudy; sea, slight; wire angle, 32°.

1	19.72	33.73	5.76	402	0	(19.72)	(33.73)	(5.76)	(23.89)	(402)	(0.00)
9	17.84	33.72	6.10	358	10	17.40	33.72	6.07	24.46	348	0.04
25	14.24	33.71	4.87	282	20	14.83	33.71	5.13	25.03	294	0.07
42	12.88	33.73	4.44	254	30	13.98	33.71	4.79	25.22	276	0.10
62	10.91	33.80	3.39	213	50	11.59	33.74	3.90	25.71	229	0.15
80	10.29	33.79	3.18	204	75	10.43	33.79	3.23	25.96	206	0.20
99	9.72	33.96	2.46	182	100	9.71	33.96	2.46	26.20	182	0.25
129	9.38	34.06	2.18	169	150	9.26	34.11	2.18	26.40	164	0.34
161	9.22	34.14	2.18	161	200	9.09	34.18	1.73	26.48	156	0.42
203	9.06	34.18	1.65	155	250	8.73	34.20	1.29	26.56	149	0.50
247	8.76	34.20	1.30	149	300	8.19	34.22	1.19	26.65	140	0.57
346	7.58	34.23	1.10	130							

83.40 PAOLINA-T; July 11, 1959; 1558 GCT; 34°14'N, 119°22'W; sounding, 12 fm; wind, 270°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.

1	20.72	33.71	5.43	429	0	(20.72)	(33.71)	(5.43)	(23.61)	(429)	(0.00)
11	17.14	33.63	5.89	349	10	17.70	33.64	5.84	24.33	361	0.04
16	15.10	33.64	4.48	304							

83.43 PAOLINA-T; July 11, 1959; 1743 GCT; 34°08'N, 119°34'W; sounding, 130 fm; wind, 140°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.

1	20.18	33.73	5.59	414	0	(20.18)	(33.73)	(5.59)	(23.77)	(414)	(0.00)
11	19.59	33.73	5.65	399	10	19.62	33.73	5.65	23.91	400	0.04
31	14.44	33.64	4.81	291	20	16.60	33.67	5.30	24.61	334	0.08
51	11.88	33.68	3.69	239	30	14.70	33.64	4.92	25.01	296	0.11
76	10.32	33.75	3.05	207	50	12.10	33.67	3.77	25.56	243	0.16
101	9.34	33.95	2.48	176	75	10.34	33.73	3.08	25.93	208	0.22
125	9.18	34.09	1.79	164	100	9.36	33.94	2.52	26.25	178	0.27
150	9.12	34.13	1.67	160	150	9.12	34.13	1.67	26.44	160	0.35
175	9.02	34.13	1.59	159	200	9.00	34.14	1.49	26.47	157	0.43
200	9.00	34.14	1.49	157							

83.51 PAOLINA-T; July 11, 1959; 2350 GCT; 33°52'N, 120°08'W; sounding, 75 fm; wind, 270°, force 2; weather, partly cloudy; sea, slight; wire angle, 08°.

2	21.12	33.74	5.34	438	0	(21.12)	(33.74)	(5.34)	(23.52)	(438)	(0.00)
12	20.49	33.71	5.41	424	10	20.70	33.72	5.40	23.62	428	0.04
32	13.54	33.55	5.03	279	20	15.36	33.56	5.20	24.80	316	0.08
51	10.98a)	33.66	3.29	224	30	13.78	33.55	5.07	25.13	284	0.11
75	9.98	33.80	2.76	197	50	11.08	33.65	3.38	25.73	227	0.16
100	9.80	33.82	2.62	194	75	9.98	33.80	2.76	26.05	197	0.21
					100	9.80	33.82	2.62	26.08	194	0.26

a) Alternate value, 10.75°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

PAOLINA-T; July 12, 1959; 0247 GCT; 33°44'N, 120°24.5'W; sounding, 650 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 12°. 83.55

2	17.30	33.66	–	350	0	(17.30)	(33.66)		(24.44)	(350)	(0.00)
12	14.68	33.62	4.96	297	10	14.82	33.62		24.97	300	0.03
31	12.54	33.64	4.05	254	20	13.98	33.63	4.72	25.15	282	0.06
41	11.60	33.61	3.66	239	30	12.59	33.64	4.10	25.44	254	0.09
55	10.38	33.73	3.09	209	50	10.66	33.68	3.21	25.82	218	0.14
70	10.06	33.78	2.94	201	75	9.94	33.80	2.85	26.05	197	0.19
95	9.47	33.87	2.48	185	100	9.39	33.89	2.37	26.21	181	0.24
114	9.22	33.94	2.24	176	150	8.86	34.05	1.76	26.42	162	0.32
134	8.94	34.00	1.98	167	200	8.48	34.18	1.40	26.58	147	0.40
153	8.85	34.07	1.70	160	250	8.22	34.25	1.06	26.67	138	0.47
182	8.59	34.15	1.54	150	300	7.76	34.25	0.87	26.74	131	0.54
216	8.40	34.20	1.26	144	400	7.09	34.28	0.64	26.86	120	0.67
246	8.25	34.25	1.07	138	500	6.42	34.33	0.50	26.98	108	0.79
295	7.82	34.25	0.88	132	600	5.84	34.33	0.35	27.06	101	0.90
349	7.37	34.25	0.69	125							
434	6.89	34.30	0.61	116							
518	6.30	34.33	0.45	106							
603	5.83	34.33	0.34	101							

PAOLINA-T; July 12, 1959; 0632 GCT; 33°34'N, 120°45'W; sounding, 890 fm; wind, 270°, force 4; weather, missing; sea, moderate; wire angle, 14°. 83.60

2	16.90	33.49	5.33	354	0	(16.90)	(33.49)	(5.33)	(24.40)	(354)	(0.00)
11	16.11	33.49	5.33	336	10	16.12	33.49	5.33	24.59	336	0.03
30	15.79	33.51	5.33	328	20	15.95	33.50	5.33	24.63	332	0.07
40	13.48	33.43	5.35	287	30	15.79	33.51	5.33	24.67	328	0.10
55	12.90	33.46	5.14	274	50	12.92	33.44	5.22	25.22	276	0.16
69	12.62	33.55	4.73	262	75	11.35	33.42	4.36	25.51	248	0.23
93	10.51	33.57	3.76	223	100	10.29	33.64	3.55	25.86	215	0.29
112	9.44	33.75	2.95	193	150	8.86	33.89	2.49	26.29	174	0.38
131	9.06	33.81	2.69	183	200	8.05	34.02	2.05	26.52	152	0.46
150	8.86	33.89	2.49	174	250	7.32	34.06	1.65	26.66	139	0.54
177	8.37	34.96	2.40	161	300	6.80	34.12	1.26	26.78	128	0.61
211	7.90	34.04	1.92	149	400	6.14	34.22	0.62	26.94	113	0.73
240	7.47	34.05	1.73	142	500	5.70	34.27	0.40	27.04	103	0.84
288	6.90	34.11	1.33	130	600	(5.30)	(34.33)	(0.31)	(27.13)	(94)	(0.95)
342	6.49	34.16	0.92	121							
425	6.11	34.22	0.58	112							
510	5.65	34.28	0.38	102							
595	5.32	34.33	0.31	95							

PAOLINA-T; July 12, 1959; 1303 GCT; 33°14'N, 121°26'W; sounding, 2000 fm; wind, 340°, force 4; weather, missing; sea, rough; wire angle, 02°. 83.70

2	15.42	33.57	5.64	316	0	(15.42)	(33.57)	(5.64)	(24.80)	(316)	(0.00)
12	15.43	33.57	5.73	316	10	15.42	33.57	5.72	24.80	316	0.03
32	14.14	33.48	5.63	296	20	15.36	33.56	5.73	24.81	315	0.06
42	13.71	33.51	5.61	285	30	14.30	33.48	5.64	24.98	299	0.09
57	12.54	33.40	5.14	271	50	13.18	33.46	5.41	25.18	279	0.15
72	11.95	33.46	4.91	256	75	11.80	33.48	4.84	25.47	252	0.22
96	10.56	33.58	4.00	223	100	10.15	33.59	3.87	25.85	216	0.28
116	9.41	33.62	3.63	202	150	8.88	33.82	3.27	26.24	179	0.38
135	9.18	33.78	3.36	187	200	8.08	34.01	2.11	26.50	154	0.46
155	8.76	33.84	3.21	176	250	7.53	34.07	1.62	26.64	141	0.54
185	8.27	33.97	2.43	160	300	7.01	34.13	1.20	26.75	130	0.61
219	7.86	34.04	1.85	148	400	6.22	34.20	0.66	26.91	115	0.73
249	7.54	34.07	1.63	141	500	5.51	34.26	0.39	27.06	102	0.85
298	7.02	34.13	1.22	130	600	5.19	34.33	0.32	27.15	93	0.95
353	6.68	34.18	0.80	122							
438	5.84	34.21	0.56	110							
523	5.44	34.29	0.35	99							
608	5.18	34.33	0.32	93							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

83.80 PAOLINA-T; July 12, 1959; 1929 GCT; 32°57'N, 122°06'W; sounding, 2100 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 16°.

2	16.95	33.49	5.34	355	0	(16.95)	(33.49)	(5.34)	(24.39)	(355)	(0.00)
11	16.92	33.48	5.38	355	10	16.92	33.48	5.38	24.39	355	0.04
30	16.48	33.48	5.72	345	20	16.91	33.48	5.38	24.39	355	0.07
39	16.26	33.44	5.39	344	30	16.48	33.48	5.72	24.49	345	0.10
53	13.19	33.12	3.62	304	50	13.37	33.13	3.65	24.89	307	0.17
67	13.14	33.23	5.42	295	75	12.93	33.34	5.27	25.14	283	0.24
90	12.17	33.46	4.72	260	100	11.16	33.48		25.58	241	0.31
108	10.48	33.49	3.28	229	150	9.18	33.70		26.09	193	0.42
127	9.66	33.57	2.82	210	200	8.52	33.89		26.34	169	0.51
144	9.29	33.66	4.18	198	250	7.69	34.00	2.15	26.56	149	0.59
171	8.82	33.80	2.38	180	300	7.02	34.03	1.85	26.68	137	0.67
202	8.50	33.89	2.07	168	400	6.42	34.14	0.77	26.84	122	0.80
230	8.13	34.00	1.95	155	500	5.59	34.22	0.42	27.01	106	0.92
276	7.19	33.99	2.32	143							
327	6.89	34.09	1.25	131							
406	6.38	34.14	0.72	121							
488	5.66	34.21	0.42	107							
572	5.30	34.23	0.49	102							

83.90 PAOLINA-T; July 13, 1959; 0243 GCT; 32°34'N, 122°48'W; sounding, 2100 fm; wind, 320°, force 5; weather, cloudy; sea, high; wire angle, 27°.

3	17.14	33.40	5.27	366	0	(17.14)	(33.40)	(5.27)	(24.27)	(366)	(0.00)
12	17.12	33.40	5.15	365	10	17.13	33.40	5.16	24.28	365	0.04
31	15.90	33.31	5.31	345	20	17.06	33.40	5.15	24.29	364	0.07
39	14.67	33.31	5.46	320	30	15.90	33.31	5.31	24.49	345	0.11
53	14.32	33.40	5.34	305	50	14.55	33.39	5.40	24.85	311	0.17
66	13.38	33.31	5.20	294	75	12.67	33.31	5.10	25.17	280	0.25
89	11.84	33.37	4.97	261	100	11.08	33.52	4.45	25.64	236	0.31
106	10.22	33.55	4.07	220	150	8.92	33.79	3.29	26.21	182	0.42
124	9.70	33.62	3.83	207	200	8.15	33.95	3.00	26.46	158	0.51
141	9.10	33.73	3.47	189	250	7.44	34.04	2.23	26.62	143	0.58
168	8.64	33.86	3.09	173	300	6.70	34.04	1.96	26.74	132	0.65
200	8.15	33.95	3.00	158	400	6.09	34.15	0.87	26.90	116	0.78
228	7.77	34.04	2.34	147	500	5.54	34.23	0.55	27.03	104	0.90
274	7.06	34.04	2.11	138							
325	6.40	34.06	1.73	127							
405	6.01	34.16	0.83	116							
487	5.62	34.22	0.58	106							
570	5.20	34.29	0.38	96							

87.35 PAOLINA-T; July 15, 1959; 0132 GCT; 33°50'N, 118°36.5'W; sounding, 180 fm; wind, 240°, force 3; weather, partly cloudy; sea, moderate; wire angle, 12°.

2	22.06	33.74	5.45	462	0	(22.06)	(33.74)	(5.45)	(23.26)	(462)	(0.00)
12	21.27	33.73	5.56	442	10	21.30	33.73	5.55	23.47	443	0.04
31	14.49	33.57	6.07	297	20	19.60	33.70	5.70	23.89	402	0.09
50	12.34	33.57	4.61	256	30	14.70	33.57	6.06	24.96	301	0.12
75	10.51	33.66	3.75	217	50	12.34	33.57	4.61	25.43	256	0.18
99	10.15	33.73	3.46	206	75	10.51	33.66	3.75	25.84	217	0.24
123	9.68	33.84	3.03	190	100	10.13	33.73	3.45	25.96	205	0.29

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
PAOLINA-T; July 14, 1959; 2214 GCT; 33°40.5'N, 118°57'W; sounding, 950 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 13°.											87.40
2	21.22	33.73	5.96	441	0	(21.22)	(33.73)	(5.69)	(23.49)	(441)	(0.00)
12	20.48	33.73	5.54	422	10	20.55	33.73	5.55	23.67	424	0.04
31	14.71	33.64	6.01	296	20	18.80	33.72	5.65	24.11	381	0.08
40	13.53	33.57	5.40	277	30	14.70	33.63	6.01	25.00	297	0.12
55	12.42	33.57	4.66	257	50	12.72	33.57	4.81	25.36	262	0.17
70	11.34	33.62	3.94	234	75	11.12	33.64	3.80	25.72	228	0.23
94	10.54	33.71	3.34	213	100	10.39	33.74	3.25	25.93	208	0.29
113	10.04	33.82	3.05	198	150	9.39	33.96	2.57	26.26	177	0.39
132	9.69	33.87	2.85	188	200	9.05	34.16	2.05	26.47	157	0.47
151	9.38	33.96	2.56	176	250	8.46	34.26	1.27	26.65	140	0.55
180	9.13	34.06	2.28	165	300	7.92	34.32	1.00	26.78	128	0.62
214	8.98	34.22	1.84	151	400	7.02	34.32	0.69	26.90	116	0.74
242	8.57	34.25	1.33	142	500	6.19	34.34	0.38	27.03	104	0.86
291	8.01	34.32	1.05	130	600	(5.67)	(34.35)	(0.30)	(27.10)	(96)	(0.96)
345	7.46	34.31	0.81	123							
428	6.77	34.33	0.61	112							
512	6.10	34.34	0.37	103							
597	5.68	34.35	0.30	97							
PAOLINA-T; July 14, 1959; 1855 GCT; 33°30'N, 119°19'W; sounding, 900 fm; wind, 270°, force 2; weather, overcast; sea, moderate; wire angle, 14°.											87.45
2	21.02	33.78	5.01	432	0	(21.02)	(33.78)	(5.01)	(23.58)	(432)	(0.00)
12	17.70	33.71	5.70	356	10	18.45	33.72	5.59	24.21	372	0.04
31	13.26	33.60	4.62	270	20	15.35	33.66	5.26	24.88	308	0.07
41	11.98	33.57	4.14	248	30	13.37	33.60	4.66	25.26	272	0.10
55	10.74	33.61	3.57	224	50	11.07	33.59	3.73	25.69	231	0.15
70	10.16	33.66	3.33	210	75	10.00	33.68	3.29	25.94	207	0.21
92	9.58	33.79	2.98	192	100	9.51	33.82	2.79	26.14	188	0.26
113	9.42	33.88	2.42	184	150	9.09	33.98	2.17	26.32	171	0.35
132	9.20	33.92	2.24	177	200	8.70	34.07	1.77	26.46	158	0.43
151	9.08	33.98	2.16	171	250	8.40	34.21	1.30	26.62	143	0.51
180	8.90	34.00	1.90	166	300	7.97	34.22	1.09	26.69	136	0.58
214	8.56	34.13	1.65	151	400	7.09	34.27	0.70	26.85	121	0.71
243	8.45	34.21	1.34	144	500	6.36	34.31	0.44	26.98	108	0.83
292	8.04	34.22	1.12	138	600	(5.75)	(34.36)	(0.32)	(27.10)	(97)	(0.94)
345	7.60	34.25	0.83	129							
429	6.85	34.28	0.62	117							
514	6.26	34.32	0.40	106							
598	5.76	34.36	0.32	97							
PAOLINA-T; July 14, 1959; 1151 GCT; 33°05'N, 119°59'W; sounding, 475 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 04°.											87.55
3	17.41	33.71	5.76	350	0	(17.41)	(33.71)	(5.76)	(24.44)	(350)	(0.00)
13	17.40	33.73	5.63	348	10	17.40	33.73	5.65	24.46	348	0.03
33	13.85	33.70	5.01	274	20	17.39	33.73	5.62	24.47	347	0.07
43	12.30	33.69	4.16	246	30	15.10	33.71	5.23	24.98	299	0.10
58	10.93	33.75	3.44	217	50	11.61	33.71	3.78	25.68	232	0.16
73	10.05	33.78	3.06	201	75	9.99	33.79	3.01	26.03	199	0.21
97	9.11	33.86	2.68	180	100	9.09	33.86	2.67	26.24	179	0.26
117	8.90	33.93	2.36	172	150	8.35	33.96	2.39	26.43	161	0.34
137	8.50	33.96	2.36	163	200	7.73	34.03	1.85	26.58	147	0.42
157	8.28	33.96	2.41	160	250	7.32	34.12	1.44	26.70	135	0.49
186	7.91	34.01	2.02	151	300	6.98	34.18	1.13	26.80	126	0.56
221	7.52	34.06	1.64	142	400	6.46	34.22	0.73	26.90	116	0.68
250	7.32	34.12	1.44	135	500	6.05	34.30	0.49	27.02	105	0.80
300	6.98	34.18	1.13	126	600	5.54	34.36	0.40	27.12	95	0.90
355	6.64	34.20	0.86	120							
440	6.28	34.25	0.61	112							
524	5.96	34.33	0.43	102							
610	5.49	34.36	0.39	94							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

87.60 PAOLINA-T; July 14, 1959; 0741 GCT; 32°56'N, 120°20'W; sounding, 410 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 33°.

2	16.16	33.51	5.72	336	0	(16.16)	(33.51)	(5.72)	(24.59)	(336)	(0.00)
11	16.16	33.49	5.54	337	10	16.16	33.49	5.55	24.58	337	0.03
36	16.11	33.49	5.72	336	20	16.14	33.49	5.55	24.58	337	0.07
48	15.15	33.51	5.73	314	30	16.13	33.49	5.60	24.58	337	0.10
60	13.74	33.46	5.63	290	50	14.90	33.50	5.72	24.87	310	0.16
79	10.93	33.51	4.32	234	75	11.60	33.48	4.70	25.51	248	0.24
94	9.98	33.60	-	212	100	9.78	33.62	3.77	25.94	208	0.29
109	9.53	33.68	3.53	199	150	9.01	33.93	2.43	26.30	173	0.39
124	9.39	33.80	3.09	188	200	8.19	34.00	2.10	26.48	156	0.47
145	9.04	33.91	2.51	175	250	7.69	34.08	1.62	26.63	142	0.55
170	8.96	34.02	2.22	165	300	7.30	34.15	1.20	26.73	132	0.62
191	8.33	33.99	2.14	158	400	6.39	34.22	0.65	26.91	115	0.75
228	7.86	34.06	1.81	147	500	(5.72)	(34.31)	(0.41)	(27.07)	(100)	(0.86)
270	7.56	34.11	1.46	139							
337	6.93	34.19	0.93	124							
411	6.30	34.23	0.60	114							
491	5.77	34.30	0.42	102							

87.70 PAOLINA-T; July 13, 1959; 2350 GCT; 32°37.5'N, 121°01.5'W; sounding, 2100 fm; wind, 340°, force 7; weather, overcast; sea, high; wire angle, 20°.

2	16.30	33.46	5.70	343	0	(16.30)	(33.46)	(5.70)	(24.51)	(343)	(0.00)
11	16.30	33.45	5.73	343	10	16.30	33.45	5.73	24.51	343	0.03
30	15.83	33.51	5.84	329	20	16.28	33.45	5.73	24.51	343	0.07
39	15.14	33.55	5.69	311	30	15.83	33.51	5.84	24.66	329	0.10
53	14.32	33.53	5.74	296	50	14.46	33.54	5.76	24.98	298	0.16
67	13.84	33.47	5.64	291	75	13.22	33.42	5.44	25.14	283	0.24
91	12.34	33.46	5.00	263	100	11.92	33.53	4.82	25.48	251	0.30
109	10.62	33.51	4.49	230	150	9.42	33.67	4.09	26.03	199	0.42
127	9.89	33.64	3.88	208	200	8.39	33.93	2.86	26.40	164	0.51
146	9.52	33.66	4.09	201	250	7.79	34.06	2.06	26.59	146	0.59
174	8.80	33.84	3.50	176	300	7.32	34.16	1.48	26.73	132	0.66
207	8.30	33.95	2.72	161	400	6.55	34.24	0.72	26.90	116	0.79
235	7.96	34.04	2.20	149	500	5.89	34.31	0.43	27.04	103	0.90
282	7.46	34.11	1.73	138							
334	7.11	34.22	1.13	124							
413	6.44	34.25	0.66	114							
494	5.92	34.31	0.44	103							
578	5.50	34.33	0.32	96							

87.80 PAOLINA-T; July 13, 1959; 1615 GCT; 32°18'N, 121°42.5'W; sounding, 2250 fm; wind, 330°, force 6; weather, overcast; sea, high; wire angle, 15°.

2	16.74	33.42	5.60	355	0	(16.74)	(33.42)	(5.60)	(24.38)	(355)	(0.00)
11	16.74	33.44	5.57	354	10	16.74	33.44	5.57	24.40	354	0.04
31	16.04	33.37	5.69	344	20	16.74	33.44	5.57	24.40	354	0.07
40	15.09	33.41	5.94	321	30	16.05	33.37	5.68	24.50	344	0.10
55	13.70	33.37	5.69	296	50	13.92	33.37	5.76	24.97	300	0.17
70	13.04	33.45	5.30	278	75	12.70	33.46	5.12	25.28	270	0.24
94	11.24	33.48	4.42	242	100	10.52	33.48	4.11	25.70	230	0.30
113	10.38	33.58	3.96	220	150	9.09	33.78	3.95	26.18	185	0.41
132	9.42	33.68	4.13	198	200	8.33	34.01	2.47	26.47	157	0.50
151	9.08	33.78	3.94	185	250	7.84	34.09	2.02	26.60	144	0.57
179	8.50	33.94	3.03	165	300	7.19	34.15	1.45	26.74	131	0.64
212	8.26	34.03	2.32	155	400	6.52	34.22	0.84	26.90	117	0.77
243	7.95	34.08	2.05	146	500	5.89	34.25	0.46	27.00	107	0.89
290	7.28	34.14	1.59	133	600	(5.21)	(34.33)	(0.34)	(27.14)	(93)	(1.00)
344	6.93	34.17	1.11	126							
429	6.32	34.24	0.72	113							
523	5.74	34.26	0.39	104							
597	5.24	34.33	0.34	94							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; July 13, 1959; 0839 GCT; 31°59.5'N, 122°23'W; sounding, 2250 fm; wind, 320°, force 4; weather, missing; sea, rough; wire angle, 24°. 87.90

3	17.04	33.48		358	0	(17.04)	(33.48)		(24.36)	(358)	(0.00)
12	17.05	33.48		358	10	17.05	33.48		24.36	358	0.04
31	16.36	33.48		342	20	17.03	33.48		24.36	358	0.07
40	16.26	33.51		338	30	16.37	33.48		24.52	343	0.11
54	15.36	33.49		320	50	15.90	33.50		24.65	330	0.17
68	14.62	33.51		304	75	14.41	33.51		24.98	299	0.25
91	13.66	33.53		283	100	12.91	33.53		25.30	268	0.33
109	12.06	33.53		253	150	9.69	33.69		26.00	201	0.44
127	10 42	33.58		221	200	8.42	33.93		26.39	164	0.53
145	9.84	33.67		206	250	7.63	34.01		26.57	147	0.62
173	8.90	33.75		184	300	7.04	34.07		26.70	135	0.69
205	8.33	33.95		162	400	6.29	34.16		26.87	119	0.82
232	7.88	33.98		153	500	5.61	34.21		27.00	107	0.94
279	7.28	34.05		140							
331	6.72	34.09		129							
410	6.21	34.16		118							
492	5.66	34.20		108							
576	5.34	34.27		99							

PAOLINA-T; July 24, 1959; 1446 GCT; 33°28.5'N, 117°46.5'W; sounding, 250 fm; wind, calm; weather, fog; sea, slight; wire angle, 03°. 90.28

1	21.28	33.58	5.30	453	0	(21.28)	(33.58)	(5.30)	(23.36)	(453)	(0.00)
11	16.24	33.60	6.01	331	10	16.35	33.60	6.01	24.61	334	0.04
31	13.22	33.55	4.97	273	20	14.48	33.57	5.50	25.00	296	0.07
51	11.82	33.57	4.31	246	30	13.30	33.55	4.98	25.24	274	0.10
76	10.75	33.68	4.20	220	50	11.84	33.57	4.32	25.53	246	0.15
100	9.98	33.69	3.76	206	75	10.76	33.68	4.21	25.81	220	0.21
125	9.54	33.82	3.46	189	100	9.98	33.69	3.76	25.96	206	0.26
164	9.33	33.92	2.66	179	150	9.39	33.89	2.90	26.21	182	0.36
204	9.16	34.04	2.18	167	200	9.21	34.02	2.20	26.34	169	0.45
253	8.41	34.09	2.09	152	250	8.42	34.09	2.10	26.51	153	0.53
302	8.57	34.24	1.28	143	300	8.56	34.23	1.32	26.61	144	0.61
407	7.59	34.28	0.89	126	400	7.66	34.28	0.90	26.78	128	0.75

PAOLINA-T; July 24, 1959; 1154 GCT; 33°20.5'N, 118°02'W; sounding, 450 fm; wind, direction missing, force 1; weather, fog; sea, smooth; wire angle, 00°. 90.32

1	20.60	33.77	4.94	422	0	(20.60)	(33.77)	(4.94)	(23.68)	(422)	(0.00)
11	20.31	33.74	4.95	417	10	20.38	33.74	4.95	23.73	418	0.04
31	16.00	33.58	5.72	328	20	18.85	33.68	5.22	24.07	385	0.08
41	14.31	33.57	5.41	293	30	16.15	33.58	5.41	24.64	331	0.12
51	13.16	33.51	4.73	274	50	13.24	33.51	4.80	25.22	276	0.18
65	12.04	33.54	4.24	252	75	11.60	33.60	4.18	25.60	240	0.24
80	11.28	33.64	4.05	231	100	10.19	33.65	3.61	25.89	212	0.30
100	10.19	33.65	3.61	212	150	9.35	33.83	3.23	26.17	186	0.40
125	9.90	33.78	3.43	198	200	8.94	34.01	2.32	26.37	166	0.49
144	9.43	33.82	3.30	188	250	8.52	34.15	1.79	26.55	150	0.57
174	9.16	33.91	2.74	176	300	7.93	34.16	1.47	26.65	140	0.65
204	8.92	34.02	2.28	165	400	7.09	34.20	1.08	26.80	126	0.78
234	8.66	34.10	2.11	156	500	6.60	34.31	0.71	26.96	111	0.91
273	8.32	34.16	1.57	146							
333	7.50	34.16	1.38	135							
407	7.02	34.21	1.03	125							
482	6.70	34.31	0.76	112							
562	6.16	34.30	0.47	106							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

90.37 PAOLINA-T; July 24, 1959; 0825 GCT; 33°11'N, 118°23.5'W; sounding, 650 fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 00°.

1	19.13	33.73	5.38	388	0	(19.13)	(33.73)	(5.38)	(24.04)	(388)	(0.00)
11	19.06	33.72	5.61	387	10	19.07	33.72	5.60	24.05	387	0.04
31	14.56	33.60	5.58	296	20	17.20	33.67	5.61	24.47	347	0.08
41	13.85	33.57	5.21	284	30	14.65	33.60	5.60	25.00	297	0.11
51	13.38	33.58	5.01	274	50	13.44	33.58	5.03	25.23	275	0.16
66	12.11	33.58	4.50	250	75	11.46	33.60	4.14	25.62	238	0.23
81	11.18	33.61	3.95	232	100	9.92	33.68	3.40	25.96	206	0.29
100	9.92	33.68	3.40	206	150	8.82	33.91	2.70	26.31	172	0.38
125	9.22	33.80	2.94	186	200	8.35	34.07	1.71	26.52	153	0.46
144	8.92	33.88	2.79	176	250	7.80	34.13	1.53	26.65	140	0.54
174	8.55	34.00	2.33	161	300	7.52	34.15	1.20	26.70	136	0.61
203	8.32	34.08	1.68	152	400	6.74	34.26	0.74	26.90	117	0.74
233	7.99	34.10	1.61	146	500	6.27	34.26	0.46	26.96	111	0.86
273	7.60	34.15	1.42	137							
333	7.40	34.15	0.85	134							
407	6.70	34.26	0.74	116							
482	6.36	34.25	0.51	112							
562	5.97	34.35	0.37	100							

90.45 PAOLINA-T; July 24, 1959; 0319 GCT; 32°53.5'N, 118°55.5'W; sounding, 930 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 00°.

2	20.02	33.80	5.07	405	0	(20.02)	(33.80)	(5.07)	(23.96)	(405)	(0.00)
12	18.90	33.78	5.33	379	10	18.95	33.78	5.33	24.12	380	0.04
32	11.70	33.64	3.86	239	20	15.10	33.70	4.55	24.97	300	0.07
42	11.04	33.64	3.52	227	30	12.05	33.64	3.94	25.54	245	0.10
52	10.32	33.69	3.08	212	50	10.43	33.68	3.15	25.86	214	0.15
67	10.01	33.75	2.84	202	75	9.76	33.79	2.72	26.07	195	0.20
81	9.55	33.81	2.65	190	100	9.07	33.86	2.45	26.23	180	0.24
101	9.06	33.86	2.44	179	150	8.84	34.04	1.81	26.42	162	0.33
125	8.99	34.00	2.01	168	200	8.35	34.14	1.47	26.57	148	0.41
145	8.89	34.04	1.84	163	250	7.82	34.18	1.17	26.68	137	0.48
175	8.58	34.07	1.72	156	300	7.47	34.22	0.90	26.76	129	0.55
204	8.31	34.15	1.44	146	400	6.71	34.30	0.53	26.93	114	0.68
234	7.96	34.19	1.34	138	500	6.04	34.34	0.39	27.03	102	0.79
273	7.68	34.18	1.07	135							
333	7.20	34.28	0.75	121							
407	6.64	34.30	0.51	113							
482	6.14	34.33	0.41	104							
563	5.70	34.40	0.29	94							

90.50 PAOLINA-T; July 24, 1959; 0010 GCT; 32°45'N, 119°16'W; sounding, 160 fm; wind, 290°, force 4; weather, cloudy; sea, moderate; wire angle, 13°.

1	17.94	33.70	5.33	362	0	(17.94)	(33.70)	(5.33)	(24.31)	(362)	(0.00)
11	13.75	33.66	4.66	276	10	14.98	33.67	4.95	24.96	300	0.03
30	12.43	33.68	3.77	249	20	12.50	33.68	3.79	25.49	250	0.06
49	10.64	33.69	3.10	217	30	12.43	33.68	3.77	25.50	249	0.08
73	9.86	33.78	2.73	197	50	10.59	33.69	3.09	25.85	216	0.13
97	9.08	33.95	2.13	173	75	9.84	33.78	2.72	26.06	197	0.18
121	8.76	34.03	1.88	162	100	9.01	33.96	2.11	26.32	171	0.23
160	8.55	34.08	1.60	155	150	8.60	34.07	1.68	26.48	156	0.31
199	8.33	34.11	1.42	150	200	8.32	34.11	1.41	26.55	149	0.39
248	7.86	34.19	1.02	137	250	(7.83)	(34.19)	(1.01)	(26.68)	(137)	(0.46)

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; July 23, 1959; 2047 GCT; 32°35'N, 119°37'W; sounding, 600 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 20°. 90.55

2	18.47	33.75	5.37	371	0	(18.47)	(33.75)	(5.37)	(24.22)	(371)	(0.00)
11	18.14	33.75	5.20	363	10	18.16	33.75	5.22	24.30	364	0.04
29	16.40	33.70	5.08	328	20	17.20	33.72	5.15	24.51	344	0.07
38	14.80	33.67	4.64	296	30	16.25	33.69	5.04	24.71	324	0.10
47	11.76	33.68	3.70	237	50	11.06	33.67	3.52	25.75	225	0.16
60	9.94	33.67	3.27	207	75	9.21	33.78	3.02	26.15	188	0.21
73	9.26	33.78	3.01	188	100	8.88	33.80	3.11	26.22	180	0.26
90	9.06	33.78	3.12	185	150	8.22	34.00	2.21	26.48	156	0.34
112	8.66	33.86	2.91	173	200	7.75	34.03	1.85	26.58	147	0.42
129	8.45	33.98	2.13	161	250	7.23	34.08	1.46	26.68	137	0.49
156	8.15	34.00	2.22	155	300	6.92	34.13	1.15	26.77	128	0.56
182	7.82	34.02	1.95	149	400	6.42	34.23	0.56	26.92	114	0.68
209	7.70	34.04	1.80	146	500	6.03	34.30	0.36	27.02	105	0.80
246	7.27	34.08	1.49	137							
300	6.92	34.13	1.15	128							
370	6.50	34.21	0.67	118							
442	6.28	34.27	0.43	110							
520	5.96	34.31	0.35	103							

PAOLINA-T; July 23, 1959; 1718 GCT; 32°25.5'N, 119°57.5'W; sounding, 500 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 07°. 90.60

2	16.66	33.51	5.52	347	0	(16.66)	(33.51)	(5.52)	(24.47)	(347)	(0.00)
12	16.64	33.51	5.37	347	10	16.65	33.51	5.37	24.47	347	0.03
32	15.16	33.45	5.52	319	20	16.64	33.51	5.37	24.47	347	0.07
42	14.43	33.43	5.40	306	30	15.26	33.45	5.51	24.75	321	0.10
56	13.18	33.41	5.04	283	50	13.24	33.37	5.10	25.10	287	0.16
71	11.84	33.50	4.48	252	75	11.45	33.58	4.30	25.57	243	0.23
95	10.49	33.58	3.86	223	100	10.26	33.60	3.72	25.84	217	0.29
115	9.65	33.69	3.31	201	150	8.78	33.94	2.47	26.34	169	0.38
133	8.94	33.84	2.75	179	200	8.31	34.05	1.96	26.50	154	0.47
153	8.74	33.95	2.44	168	250	7.91	34.11	1.54	26.61	144	0.54
182	8.45	34.02	2.20	158	300	7.39	34.17	1.22	26.73	132	0.61
216	8.20	34.07	1.79	151	400	6.64	34.22	0.74	26.88	118	0.74
244	7.96	34.10	1.56	145	500	6.10	34.28	0.64	27.00	107	0.86
294	7.46	34.16	1.25	134	600	5.53	34.30	0.40	27.08	99	0.97
348	6.88	34.20	0.86	123							
432	6.48	34.24	0.65	115							
517	5.99	34.29	0.64	106							
601	5.52	34.30	0.39	99							

PAOLINA-T; July 23, 1959; 1055 GCT; 32°06'N, 120°40'W; sounding, 2040 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 09°. 90.70

2	17.50	33.60	5.12	360	0	(17.50)	(33.60)	(5.12)	(24.34)	(360)	(0.00)
12	17.50	33.58	5.14	361	10	17.50	33.58	5.14	24.32	361	0.04
32	17.20	33.58	5.17	354	20	17.50	33.58	5.14	24.32	361	0.07
42	16.34	33.55	5.40	337	30	17.30	33.58	5.16	24.38	356	0.11
56	14.92	33.53	5.49	308	50	15.50	33.53	5.48	24.76	320	0.18
71	14.18	33.53	5.34	294	75	13.94	33.53	5.25	25.09	288	0.25
95	12.34	33.54	4.67	258	100	12.26	33.55	4.61	25.43	255	0.32
115	11.22	33.55	4.31	237	150	9.27	33.68	3.68	26.06	196	0.43
134	9.76	33.58	3.99	211	200	8.51	33.91	2.61	26.36	167	0.52
154	9.18	33.73	3.50	190	250	7.74	34.04	2.02	26.58	146	0.61
183	8.74	33.86	2.80	174	300	7.29	34.10	1.46	26.69	136	0.68
218	8.22	33.96	2.44	160	400	6.58	34.19	0.84	26.86	120	0.81
247	7.79	34.03	2.09	148	500	5.87	34.24	0.46	27.00	107	0.93
296	7.32	34.10	1.48	136	600	5.42	34.33	0.33	27.12	95	1.04
351	6.95	34.16	1.09	127							
435	6.28	34.21	0.66	115							
519	5.76	34.26	0.43	104							
604	5.40	34.34	0.32	94							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.80	PAOLINA-T; July 23, 1959; 0433 GCT; 31°47'N, 121°21.5'W; sounding, 2050 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 10°.										
2	17.62	33.58	5.46	364	0	(17.62)	(33.58)	(5.46)	(24.29)	(364)	(0.00)
12	17.62	33.57	5.31	364	10	17.62	33.57	5.32	24.29	364	0.04
31	17.18	33.58	5.27	354	20	17.56	33.57	5.30	24.30	363	0.07
41	14.98	33.53	5.85	310	30	17.20	33.58	5.27	24.40	354	0.11
56	13.44	33.51	5.14	280	50	13.95	33.51	5.41	25.07	290	0.17
70	12.27	33.52	4.54	258	75	11.80	33.53	4.38	25.51	248	0.24
95	10.30	33.58	3.85	220	100	10.02	33.60	3.74	25.88	214	0.30
114	9.40	33.71	3.37	196	150	8.61	33.91	3.28	26.34	169	0.40
134	8.91	33.79	3.18	182	200	7.74	34.05	2.08	26.59	146	0.48
153	8.54	33.93	3.28	166	250	7.33	34.16	1.34	26.73	132	0.55
182	7.97	34.02	2.04	151	300	6.84	34.18	1.14	26.82	124	0.61
216	7.60	34.07	2.10	142	400	6.23	34.24	0.56	26.95	112	0.74
245	7.38	34.15	1.40	133	500	5.80	34.32	0.40	27.06	101	0.84
294	6.89	34.18	1.17	125	600	5.50	34.35	0.29	27.12	95	0.95
347	6.52	34.21	0.78	118							
431	6.08	34.27	0.48	108							
515	5.74	34.33	0.39	99							
600	5.50	34.35	0.29	95							
90.90	PAOLINA-T; July 22, 1959; 2059, 2307 GCT; 31°32'N, 121°53'W; sounding, 2100 fm; wind, 340°, force 3; weather, overcast; sea, moderate; wire angle, 10°, 20°.										
1	17.44	33.46	5.27	368	0	(17.44)	(33.46)	(5.27)	(24.25)	(368)	(0.00)
11	17.20	33.47	5.31	362	10	17.21	33.47	5.30	24.31	362	0.04
30	16.32	33.42	5.43	346	20	17.11	33.46	5.32	24.33	360	0.07
40	15.24	33.46	5.65	320	30	16.32	33.42	5.43	24.48	346	0.11
50	14.35	33.44	5.53	303	50	14.35	33.44	5.53	24.94	303	0.17
64	13.96	33.51	5.20	290	75	13.22	33.49	5.01	25.20	278	0.25
79	12.91	33.48	4.92	272	100	11.12	33.54	4.16	25.64	236	0.31
98	11.62	33.52	4.39	246	150	9.43	33.74	3.29	26.08	194	0.42
121	10.12	33.58	3.74	216	200	8.64	33.92	2.56	26.35	168	0.51
140	9.58	33.71	3.38	198	250	7.92	34.02	2.03	26.54	150	0.59
169	9.20	33.80	3.08	186	300	7.17	34.07	1.61	26.69	136	0.67
197	8.68	33.91	2.61	170	400	6.29	34.18	0.75	26.89	117	0.80
226	8.25	33.98	2.24	158	500	5.68	34.26	0.43	27.03	104	0.92
264	7.72	34.04	1.92	146	600	5.12	34.32	0.33	27.14	93	1.02
322	6.88	34.09	1.41	132	700	4.75	34.37	0.30	27.23	85	1.12
395	6.28	34.18	0.76	118	800	4.50	34.43	0.37	27.30	78	1.20
469	5.80	34.22	0.49	108	1000	3.90	34.47	0.55	27.40	69	1.37
548	5.39	34.29	0.37	98	1200	3.40	34.51	0.81	27.48	61	1.52
					1500	2.81	34.56	1.17	27.58	52	1.71
371a)	6.49	34.15	1.01	122	2000	2.06	34.63	1.81	27.69	42	2.00
463	6.06	34.23	0.55	110	2500	1.80	34.65	2.39	27.73	37	
557	5.42	34.31	0.34	97	3000	1.63	34.67	2.67	27.76	35	
651	4.89	34.33	0.30	90							
744	4.64	34.41	0.34	81							
931	4.10	34.46	0.47	72							
1118	3.58	34.49	0.71	64							
1305	3.18	34.54	0.92	57							
1494	2.82	34.56	1.15	53							
1683	2.50	34.60	1.34	47							
1873	2.18	34.60	1.68	44							
2064	2.02	34.64	1.86	40							
2256	1.90	34.65	2.16	38							
2450	1.80	34.65	2.21	37							
2644	1.75	34.65	2.44	37							
2839	1.67	34.66	2.56	36							
2938	1.65	34.66	2.65	36							
3036	1.62	34.67	2.68	34							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; July 10, 1959; 0547 GCT;[a] 32°56.5'N, 117°23.5'W; sounding, 320 fm; wind, 350°, force 2; weather, partly cloudy; sea, slight; wire angle, 18°. 93.28

226	9.01	34.11	1.78	160
236	9.02	34.17	1.60	156
246	9.06	34.24	1.34	151
255	8.88	34.18	1.32	153
265	8.87	34.21	1.19	150
275	8.71	34.22	1.14	147
285	8.64	34.22	1.15	146
295	8.54	34.22	1.11	144
306	8.51	34.23	1.06	143
316	8.52	34.23	0.98	143
325	8.36	34.24	1.02	140
336	8.28	34.26	0.92	138
346	7.98	34.23	1.02	136
356	7.93	34.24	0.89	134
366	7.86	34.25	0.86	133
376	7.78	34.25	0.88	132
386	7.68	34.25	0.84	130
396	7.72	34.25	0.77	130

PAOLINA-T; July 10, 1959; 2250 GCT;[a] 32°55'N, 117°22'W; sounding, 300 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 12°. 93.28

318	8.23	34.24	1.06	138
327	7.98	34.22	0.93	136
337	7.92	34.23	0.70	134
347	7.94	34.25	0.59	134
356	7.86	34.26	0.51	132
367	7.89	34.28	0.40	131
376	7.83	34.27	0.36	131
386	7.70	34.29	0.38	127
395	7.64	34.32	0.37	125
404	7.58	34.29	0.38	126
414	7.48	34.37u	0.39	
424	7.41	34.31	0.48	122
433	7.39	34.46u	0.46	
443	7.32	34.31	0.56	121
452	7.21	34.30	0.55	120
462	7.20	34.29	0.56	121
472	7.14	34.31	0.56	118

PAOLINA-T; July 20, 1959; 2042 GCT; 32°55'N, 117°22'W; sounding, 300 fm; wind, 220°, force 4; weather, cloudy; sea, moderate; wire angle, 08°. 93.28

2	21.96	33.75	5.30	459	0	(21.96)	(33.75)	(5.30)	(23.30)	(459)	(0.00)
12	17.88	33.61	6.14	368	10	18.80	33.64	5.96	24.05	387	0.04
32	12.83	33.54	4.86	267	20	14.76	33.55	5.52	24.93	304	0.08
51	11.44	33.57	4.17	240	30	13.05	33.54	4.95	25.27	271	0.10
75	10.58	33.61	3.86	221	50	11.49	33.57	4.18	25.59	240	0.16
100	9.99	33.70	3.61	205	75	10.58	33.61	3.86	25.80	221	0.21
124	9.58	33.77	3.47	194	100	9.99	33.70	3.61	25.96	205	0.27
162	9.43	33.92	2.53	180	150	9.48	33.87	2.85	26.18	185	0.37
201	9.02	34.07	1.91	163	200	9.03	34.06	1.95	26.40	164	0.46
250	8.96	34.21	1.35	152	250	8.96	34.21	1.35	26.53	152	0.54
299	8.40	34.26	1.22	139	300	(8.39)	(34.26)	(1.22)	(26.66)	(139)	(0.61)

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.30 PAOLINA-T; July 20, 1959; 2254 GCT; 32°50'N, 117°32'W; sounding, 470 fm; wind, 220°, force 3; weather, overcast; sea, moderate; wire angle, 09°.

2	21.06	33.74	5.05	436	0	(21.06)	(33.74)	(5.05)	(23.54)	(436)	(0.00)
12	20.74	33.71	5.12	430	10	20.96	33.73	5.08	23.56	434	0.04
32	15.56	33.57	5.70	319	20	17.50	33.62	5.50	24.36	358	0.08
42	14.50	33.57	5.54	297	30	15.71	33.57	5.69	24.74	322	0.12
56	12.06	33.55	4.25	252	50	14.00	33.56	5.33	25.10	287	0.18
77	11.50	33.57	3.97	240	75	11.57	33.57	3.99	25.58	242	0.24
95	10.48	33.61	3.85	220	100	10.21	33.63	3.81	25.86	214	0.30
115	9.58	33.77	3.41	194	150	9.35	33.91	2.68	26.23	180	0.40
134	9.46	33.87	2.87	184	200	9.05	34.08	1.80	26.41	163	0.49
154	9.32	33.92	2.57	178	250	8.84	34.15	1.64	26.49	155	0.57
182	9.17	34.02	1.99	169	300	8.22	34.19	1.41	26.62	142	0.64
216	8.96	34.11	1.72	159	400	7.51	34.24	0.92	26.77	129	0.78
246	8.87	34.14	1.65	156	500	6.78	34.29	0.57	26.91	115	0.91
295	8.26	34.19	1.43	143	600	6.07	34.27	0.40	26.98	108	1.03
349	7.86	34.20	1.19	136							
433	7.25	34.27	0.77	124							
518	6.62	34.29	0.52	113							
602	6.06	34.27	0.39	108							

93.40 PAOLINA-T; July 21, 1959; 0508 GCT; 32°29.5'N, 118°12'W; sounding, 920 fm; wind, 220°, force 3; weather, overcast; sea, moderate; wire angle, 02°.

2	18.64	33.73	5.12	377	0	(18.64)	(33.73)	(5.12)	(24.16)	(377)	(0.00)
12	18.52	33.71	5.18	375	10	18.55	33.71	5.17	24.17	375	0.04
32	14.25	33.57	5.16	292	20	17.90	33.68	5.19	24.31	362	0.07
42	13.24	33.57	4.73	272	30	15.00	33.58	5.17	24.90	306	0.11
52	12.74	33.57	4.48	263	50	12.77	33.57	4.50	25.36	263	0.16
67	12.00	33.57	4.14	249	75	11.67	33.58	4.03	25.57	242	0.23
81	11.46	33.59	-	238	100	10.34	33.63	3.49	25.85	216	0.29
100	10.34	33.63	3.49	216	150	8.84	33.86	2.65	26.27	176	0.39
125	9.67	33.73	2.94	198	200	8.36	34.01	2.11	26.46	158	0.47
145	8.96	33.85	2.71	178	250	7.94	34.14	1.56	26.63	142	0.55
174	8.56	33.93	2.37	166	300	7.58	34.22	1.10	26.74	131	0.62
204	8.33	34.02	2.06	156	400	6.93	34.27	0.66	26.87	119	0.75
233	8.06	34.10	1.71	146	500	5.91	34.33	0.35	27.06	102	0.86
273	7.78	34.18	1.36	136							
332	7.34	34.24	0.85	126							
407	6.88	34.27	0.63	118							
482	6.04	34.32	0.37	104							
561	5.68	34.34	0.32	98							

93.50 PAOLINA-T; July 21, 1959; 1205 GCT;[a] 32°12.5'N, 118°54'W; sounding, 810 fm; wind, 270°, force 2; weather, overcast; sea, moderate; wire angle, 00°.

1	18.37	33.78	5.28	366
6	18.36	33.78	5.31	366
11	18.35	33.77	5.25	366
14	18.14	33.77	5.25	362
17	15.84	33.69	5.23	316
19	13.68	33.68	4.93	272
22	12.06	33.63	4.18	246
25	11.84	33.67	4.02	239
30	10.98	33.61	3.54	228
35	10.76	33.64	3.42	222
40	10.54	33.66	3.34	217
45	10.32	33.68	3.26	212
50	10.13	33.70	3.13	208
54	10.07	33.73	3.10	204
59	10.01	33.75	3.00	202
64	9.82	33.77	2.92	198
69	9.73	33.81	2.84	193
75	9.59	33.85	2.71	188

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m	

PAOLINA-T; July 21, 1959; 1312 GCT; 32°12.5'N, 118°54'W; sounding, 810 fm; wind, 270°, force 2; weather, overcast; sea, moderate; wire angle, 00°. 93.50

2	18.40	33.78	5.51	367	0	(18.40)	(33.78)	(5.51)	(24.26)	(367)	(0.00)	
12	18.38	33.78	5.50	366	10	18.39	33.78	5.50	24.27	366	0.04	
32	11.99	33.64	4.43	244	20	14.80	33.69	5.30	25.03	294	0.07	
42	10.53	33.66	3.09	217	30	12.30	33.64	4.60	25.50	249	0.10	
52	10.16	33.71	3.26	207	50	10.22	33.69	3.25	25.91	210	0.14	
67	9.84	33.78	3.06	198	75	9.71	33.80	2.95	26.09	193	0.19	
101	9.36	33.87	2.66	182	100	9.37	34.87	2.67	26.20	183	0.24	
125	9.13	33.98	2.24	172	150	8.88	34.06	1.94	26.43	161	0.33	
145	8.96	34.04	2.01	164	200	8.19	34.20	1.18	26.64	141	0.40	
175	8.50	34.18	1.45	147	250	7.39	34.21	1.00	26.77	129	0.47	
204	8.14	34.20	1.17	140	300	7.08	34.23	0.72	26.83	123	0.54	
234	7.52	34.21	1.10	131	400	6.53	34.27	0.59	26.93	114	0.66	
273	7.26	34.22	0.86	127	500	6.03	34.31	0.40	27.03	104	0.77	
333	6.87	34.25	0.60	119								
407	6.47	34.27	0.58	113								
482	6.10	34.31	0.39	105								
561	5.90	34.33	0.45	101								

PAOLINA-T; July 21, 1959; 1907 GCT; 31°52.5'N, 119°37.5'W; sounding, 1880 fm; wind, direction missing, force 1; weather, overcast; sea, moderate; wire angle, 05°. 93.60

1	17.31	33.70		348	0	(17.31)	(33.70)		(24.46)	(348)	(0.00)	
11	17.12	33.68		345	10	17.13	33.68		24.49	345	0.03	
31	15.12	33.56		311	20	16.70	33.65		24.57	338	0.07	
41	13.76	33.49		288	30	15.15	33.56		24.85	311	0.10	
51	13.02	33.48		275	50	13.03	33.48		25.23	275	0.16	
65	11.28	33.49		242	75	10.79	33.59		25.74	226	0.22	
80	10.57	33.68		216	100	9.84	33.78		26.04	198	0.28	
100	9.84	33.78		198	150	8.90	34.00		26.38	166	0.37	
124	9.30	33.87		182	200	8.64	34.14		26.52	152	0.45	
144	8.96	33.97		170	250	8.05	34.18		26.64	141	0.52	
173	8.76	34.07		159	300	7.65	34.20		26.71	134	0.60	
210	8.56	34.16		149	400	6.89	34.29		26.90	117	0.72	
231	8.24	34.17		144	500	6.08	34.31		27.02	105	0.84	
270	7.88	34.18		138								
330	7.47	34.23		129								
404	6.83	34.29		116								
478	6.22	34.31		107								
558	5.76	34.31		100								

PAOLINA-T; July 22, 1959; 0126 GCT; 31°32'N, 120°15.5'W; sounding, 2050 fm; wind, 290°, force 2; weather, overcast; sea, moderate; wire angle, 05°. 93.70

1	17.93	33.58	5.25	371	0	(17.93)	(33.58)	(5.25)	(24.22)	(371)	(0.00)	
11	17.48	33.56	5.30	362	10	17.49	33.56	5.30	24.31	362	0.04	
31	16.23	33.39	5.42	347	20	17.40	33.55	5.31	24.33	360	0.07	
41	15.46	33.50	5.70	322	30	16.35	33.40	5.39	24.46	348	0.11	
51	14.58	33.54	5.46	301	50	14.61	33.54	5.48	24.95	302	0.17	
66	13.44	33.44	5.16	286	75	13.39	33.49	5.10	25.17	281	0.24	
81	13.06	33.54	4.99	271	100	11.88	33.51	4.51	25.48	252	0.31	
100	11.88	33.51	4.51	252	150	9.19	33.68	3.94	26.08	194	0.42	
125	10.05	33.62	3.64	212	200	8.45	33.95	2.61	26.41	163	0.51	
144	9.30	33.66	3.98	198	250	7.95	34.04	2.04	26.55	150	0.60	
174	8.82	33.84	3.56	177	300	7.39	34.12	1.38	26.69	136	0.67	
204	8.40	33.96	2.54	162	400	6.62	34.22	0.67	26.88	118	0.80	
234	8.14	34.00	2.26	155	500	5.71	34.26	0.37	27.03	104	0.92	
273	7.64	34.09	1.63	142								
332	7.11	34.15	1.08	130								
408	6.54	34.23	0.61	116								
483	5.82	34.25	0.39	106								
563	5.42	34.36	0.32	94								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	ΔD dyn. m

93.80 PAOLINA-T; July 22, 1959; 0722 GCT; 31°11'N, 120°56'W; sounding, 2050 fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 02°.

2	17.64	33.44	5.45	374	0	(17.64)	(33.44)	(5.45)	(24.18)	(374)	(0.00)
12	17.54	33.44	5.42	372	10	17.56	33.44	5.43	24.21	372	0.04
32	16.05	33.37	5.76	344	20	17.52	33.44	5.43	24.22	371	0.07
42	15.10	33.36	5.90	325	30	17.10	33.42	5.49	24.30	363	0.11
52	14.76	33.37	5.83	316	50	14.78	33.37	5.84	24.79	317	0.18
67	14.26	33.40	5.71	305	75	14.21	33.43	5.68	24.96	301	0.26
81	13.58	33.48	5.52	285	100	12.33	33.49	5.17	25.38	261	0.33
100	12.33	33.49	5.17	261	150	9.88	33.73	4.40	26.00	202	0.44
125	11.02	33.64	4.76	227	200	8.53	33.93	2.86	26.38	166	0.54
144	10.12	33.71	4.62	207	250	7.86	33.99	2.42	26.53	152	0.62
173	9.06	33.78	3.30	185	300	7.32	34.04	1.68	26.65	140	0.70
202	8.50	33.93	2.85	166	400	6.30	34.13	0.96	26.85	121	0.83
232	8.03	33.96	2.69	156	500	5.93	34.25	0.48	26.99	108	0.95
271	7.68	34.03	1.93	146							
331	6.93	34.06	1.48	134							
406	6.26	34.14	0.94	120							
480	6.04	34.24	0.51	110							
560	5.56	34.28	0.38	101							

93.90 PAOLINA-T; July 22, 1959; 1333 GCT; 30°51'N, 121°33'W; sounding, 2220 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 00°.

1	17.76	33.38	5.33	381	0	(17.76)	(33.38)	(5.33)	(24.11)	(381)	(0.00)
12	17.66	33.40	5.33	378	10	17.67	33.39	5.33	24.15	378	0.04
32	16.48	33.30	5.59	359	20	17.71	33.41	5.35	24.14	378	0.08
42	15.40	33.22	5.72	341	30	17.00	33.35	5.50	24.27	366	0.11
52	14.92	33.28	5.77	327	50	15.00	33.24	5.77	24.64	331	0.18
67	15.46	33.62	5.55	313	75	15.07	33.60	5.50	24.89	307	0.26
81	13.93	33.43	5.42	295	100	12.81	33.49	5.09	25.28	270	0.34
101	12.78	33.49	5.08	269	150	10.06	33.67	4.22	25.92	209	0.46
125	11.36	33.64	4.69	232	200	8.57	33.86	3.46	26.31	172	0.55
145	10.26	33.65	4.26	213	250	7.72	34.01	2.33	26.56	148	0.64
174	9.28	33.82	4.12	186	300	7.10	34.06	1.57	26.69	136	0.71
204	8.47	33.86	3.39	170	400	6.23	34.12	0.82	26.85	121	0.84
233	7.98	33.96	2.86	156	500	5.62	34.22	0.49	27.00	106	0.96
272	7.42	34.04	1.85	142							
332	6.78	34.07	1.35	131							
406	6.19	34.13	0.78	120							
481	5.72	34.20	0.53	109							
561	5.30	34.27	0.37	99							

93.90 PAOLINA-T; July 22, 1959; 1507 GCT;[a] 30°51'N, 121°33'W; sounding, 2220 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 00°.

52	14.92	33.22	5.76	331
57	14.98	33.32	5.75	325
61	15.15	33.39	5.73	323
64	15.40	33.55	5.61	317
67	15.30	33.57	5.56	313
69	15.12	33.54	5.54	312
71	14.86	33.49	5.51	310
73	14.52	33.46	5.51	306
76	14.28	33.42	5.51	304
79	13.80	33.37	5.44	298
82	13.84	33.46	5.43	292

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_3$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_3$ 10^{-5} cm/g	ΔD dyn. m	
PAOLINA-T; July 20, 1959; 1450 GCT; 32°15.5'N, 117°08.5'W; sounding, 30 fm; wind, direction missing, force 1; weather, overcast; sea, slight; wire angle, 00°.												97.30
1	21.04	33.73	5.28	437	0	(21.04)	(33.73)	(5.28)	(23.53)	(437)	(0.00)	
11	14.37	33.53	5.47	297	10	14.50	33.53	5.46	24.97	300	0.04	
31	12.60	33.58	3.83	259	20	13.41	33.56	4.59	25.22	276	0.06	
41	11.36	33.58	3.72	237	30	12.64	33.58	3.84	25.38	260	0.09	
BLACK DOUGLAS; July 9, 1959; 0634 GCT;[a] 32°11.5'N, 117°17'W; sounding, 700 fm; wind, 290°, force 1; weather, clear; sea, moderate; wire angle, 10°.												97.32
376	7.96	34.32	0.69	128								
384	7.83	34.33	0.56	126								
393	7.46	34.29	0.69	124								
402	7.42	34.28	0.62	124								
411	7.24	34.26	0.60	124								
420	7.02	34.23	0.58	123								
429	7.01	34.23	0.62	123								
438	6.94	34.23	0.63	122								
447	6.74	34.22	0.52	120								
456	6.62	34.18u	0.84u									
465	6.58	34.22	0.50	118								
474	6.52	34.23	0.47	116								
482	6.50	34.23	0.51	116								
491	6.54	34.27	0.74	113								
500	6.50	34.27	0.56	113								
508	6.54	34.29	0.54	112								
517	6.53	34.30	0.45	111								
527	6.51	34.33	0.39	109								
PAOLINA-T; July 20, 1959; 1302 GCT; 32°11.5'N, 117°16'W; sounding, 700 fm; wind, direction missing, force 1; weather, overcast; sea, slight; wire angle, 01°.												97.32
2	21.90	33.80	5.19	454	0	(21.90)	(33.80)	(5.19)	(23.35)	(454)	(0.00)	
12	16.58	33.58	5.93	340	10	16.92	33.59	5.92	24.48	347	0.04	
32	13.86	33.52	5.51	288	20	14.98	33.51	5.80	24.85	311	0.07	
42	12.70b)	33.52	4.73	266	30	13.86	33.52	5.52	25.09	288	0.10	
52	11.60	33.53	3.98	245	50	11.80	33.53	4.07	25.50	249	0.16	
66	10.57	33.62	3.82	220	75	10.39	33.65	3.72	25.85	216	0.21	
81	10.29	33.66	3.65	213	100	9.98	33.71	3.50	25.97	204	0.27	
100	9.98	33.71	3.50	204	150	9.43	33.92	2.82	26.23	180	0.36	
125	9.70	33.82	3.23	192	200	9.28	34.08	1.99	26.38	166	0.45	
144	9.46	33.90	2.92	182	250	9.11	34.20	1.45	26.49	155	0.54	
174	9.42	34.05	2.23	170	300	8.66	34.20	1.38	26.57	148	0.61	
203	9.26	34.09	1.95	165	400	7.39	34.18	1.08	26.74	131	0.76	
232	9.14	34.18	1.56	156	500	6.73	34.24	0.63	26.88	118	0.89	
272	9.08	34.22	1.35	153								
331	8.14	34.18	1.39	142								
405	7.33	34.18	1.05	131								
480	6.86	34.22	0.70	121								
559	6.35	34.29	0.45	110								

a) Test cast.
b) Alternate value, 13.00°C, not used in interpolation.

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5907

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_{-5}}^{3}$ 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_{-5}}^{3}$ 10 cm/g	ΔD dyn. m
97.40	PAOLINA-T; July 20, 1959; 0631 GCT; 31°52.5'N, 117°49.5'W; sounding, 720 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 10°.										
1	20.48	33.73	5.19	422	0	(20.48)	(33.73)	(5.19)	(23.68)	(422)	(0.00)
11	20.48	33.72	5.16	422	10	20.48	33.72	5.16	23.68	422	0.04
30	17.80	33.66	5.50	362	20	19.50	33.69	5.23	23.92	400	0.08
40	16.34	33.58	5.79	335	30	17.80	33.66	5.50	24.31	362	0.12
50	15.17	33.54	5.56	312	50	15.17	33.54	5.56	24.84	312	0.19
64	13.65	33.55	5.15	282	75	12.71	33.56	4.50	25.36	262	0.26
79	12.38	33.57	4.34	256	100	10.88	33.62	4.02	25.74	226	0.32
98	10.96	33.61	4.04	228	150	9.79	33.90	2.79	26.15	187	0.43
121	10.32	33.80	3.06	204	200	9.00	34.06	2.22	26.40	164	0.52
140	9.89	33.87	2.91	192	250	7.87	34.06	2.08	26.58	147	0.60
167	9.66	33.97	2.57	180	300	7.97	34.18	1.35	26.66	139	0.67
196	9.16	34.06	2.21	165	400	7.03	34.23	0.82	26.83	123	0.80
225	7.98	34.00	2.30	152	500	6.39	34.24	0.59	26.94	113	0.93
263	7.85	34.09	1.88	144							
321	8.01	34.25	1.06	135							
394	7.07	34.23	0.83	124							
468	6.53	34.23	0.65	116							
548	6.24	34.30	0.40	108							
97.50	PAOLINA-T; July 20, 1959; 0027 GCT; 31°26'N, 118°30'W; sounding, 1300 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 09°.										
3	20.42	33.75	5.21	419	0	(20.42)	(33.75)	(5.21)	(23.71)	(419)	(0.00)
13	20.42	33.73	5.19	420	10	20.42	33.73	5.20	23.70	420	(0.04)
33	16.87	33.57	5.95	348	20	20.10	33.71	5.28	23.78	413	(0.08)
42	15.34	33.56	5.73	315	30	17.13	33.57	5.93	24.42	352	(0.12)
57	14.24	33.58	5.12	291	50	14.27	33.53	5.23	25.02	295	(0.19)
71	12.64	33.51	4.41	265	75	12.25	33.56	4.14	25.44	255	(0.26)
96	10.70	33.67	3.50	220	100	10.66	33.68	3.54	25.83	218	(0.32)
116	10.01	33.68	3.76	208	150	9.15	33.80	3.19	26.18	185	(0.42)
135	9.50	33.73	3.40	196	200	8.28	34.02	2.31	26.48	156	(0.50)
154	9.04	33.82	3.12	182	250	7.70	34.09	1.72	26.63	142	(0.58)
183	8.51	33.98	2.52	162	300	7.25	34.16	1.25	26.74	131	(0.65)
218	8.06	34.05	2.10	150	400	6.41	34.23	0.75	26.91	115	(0.78)
247	7.72	34.09	1.75	142	500	6.06	(34.31)	0.42	(27.03)	(104)	(0.89)
297	7.28	34.16	1.26	131	600	5.59	(34.35)	0.38	(27.11)	(96)	(1.00)
351	6.75	34.20	0.88	122							
436	6.23	34.25	0.65	111							
520	6.00	34.34a)	0.35	102							
606	5.54	34.35a)	0.39	96							
97.60	PAOLINA-T; July 19, 1959; 1743 GCT; 31°05'N, 119°03.5'W; sounding, 1920 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 13°.										
3	17.98	33.62	5.06	369	0	(17.98)	(33.62)	(5.06)	(24.24)	(369)	(0.00)
13	17.97	33.60	5.19	370	10	17.97	33.60	5.19	24.23	370	0.04
32	16.09	33.57	5.57	330	20	17.96	33.60	5.20	24.23	370	0.07
42	14.96	33.58	5.58	306	30	16.16	33.54	5.55	24.61	334	0.11
56	13.97	33.58	5.10	285	50	14.38	33.58	5.33	25.04	294	0.17
71	12.54	33.46	4.77	267	75	12.27	33.45	4.70	25.36	263	0.24
95	10.52	33.55	4.03	225	100	10.15	33.58	3.84	25.84	216	0.30
113	9.79	33.62	3.65	208	150	9.19	33.77	3.10	26.15	188	0.40
132	9.21	33.68	3.56	195	200	8.52	33.98	2.19	26.42	162	0.49
152	9.18	33.78	3.04	186	250	7.99	34.10	1.62	26.60	145	0.57
180	8.73	33.95	2.47	168	300	7.57	34.15	1.14	26.69	136	0.64
214	8.39	34.00	2.04	159	400	6.88	34.25	0.66	26.87	119	0.78
243	8.04	34.09	1.72	147	500	6.11	34.29	0.39	27.00	107	0.90
292	7.64	34.14	1.20	138	600	(5.59)	(34.33)	(0.26)	(27.10)	(97)	(1.00)
346	7.20	34.20	0.92	128							
429	6.64	34.27	0.54	116							
514	6.00	34.29	0.36	106							
599	5.60	34.33	0.26	98							

a) An error of - 0.1‰ chlorinity in burette reading has been assumed. The listed observed and interpolated values incorporate the correction.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; July 19, 1959; 1128 GCT; 30°48'N, 119°45'W; sounding, 1930 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 21°. 97.70

3	17.61	33.56	5.50	365	0	(17.61)	(33.56)	(5.50)	(24.28)	(365)	(0.00)
12	17.61	33.57	5.27	364	10	17.61	33.57	5.30	24.29	364	0.04
31	17.58	33.58	5.17	362	20	17.60	33.58	5.21	24.30	363	0.07
40	17.40	33.55	5.17	360	30	17.58	33.58	5.18	24.31	362	0.11
54	16.29	33.53	5.48	338	50	16.68	33.53	5.37	24.48	346	0.18
68	15.35	33.53	5.53	317	75	15.00	33.52	5.51	24.85	311	0.26
91	13.87	33.49	5.37	290	100	13.04	33.49	5.20	25.24	274	0.34
109	12.03	33.51	4.94	254	150	9.59	33.77	3.30	26.08	194	0.45
128	10.16	33.55	4.39	220	200	8.72	33.96	2.60	26.38	166	0.54
146	9.69	33.73	3.49	198	250	8.08	34.06	2.00	26.55	149	0.62
173	9.12	33.89	2.82	178	300	7.61	34.13	1.52	26.67	138	0.70
205	8.65	33.98	2.53	164	400	6.80	34.21	0.95	26.85	121	0.83
232	8.24	34.03	2.18	155	500	6.13	34.30	0.53	27.00	106	0.95
278	7.83	34.11	1.71	143							
329	7.31	34.16	1.27	132							
409	6.75	34.22	0.89	120							
490	6.20	34.29	0.55	108							
573	5.60	34.31	0.41	99							

PAOLINA-T; July 19, 1959; 0506 GCT; 30°32'N, 120°28.5'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 14°. 97.80

1	17.76	33.58	5.20	366	0	(17.76)	(33.58)	(5.20)	(24.27)	(366)	(0.00)
10	17.76	33.58	5.24	366	10	17.76	33.58	5.24	24.27	366	0.04
30	17.54	33.56	5.16	363	20	17.67	33.57	5.22	24.28	365	0.07
39	17.42	33.58	5.27	359	30	17.54	33.56	5.16	24.30	363	0.11
54	16.75	33.53	5.35	347	50	16.99	33.54	5.33	24.43	351	0.18
68	16.18	33.53	5.40	335	75	15.89	33.54	5.40	24.67	328	0.27
92	14.66	33.57	5.39	300	100	13.96	35.61	5.34	25.15	283	0.34
111	13.00	33.57	5.21	268	150	10.31	33.53	4.35	25.78	223	0.47
130	11.56	33.53	4.73	244	200	8.66	33.85	3.25	26.29	174	0.57
149	10.37	33.53	4.36	224	250	7.92	34.03	2.15	26.55	149	0.66
178	8.96	33.75	3.69	186	300	7.28	34.08	1.72	26.67	138	0.73
211	8.54	33.89	3.01	169	400	6.53	34.16	0.90	26.85	121	0.86
241	8.08	34.00	2.33	154	500	5.83	34.26	0.44	27.01	106	0.98
289	7.40	34.07	1.78	140	600	(5.49)	(34.34)	(0.31)	(27.12)	(95)	(1.09)
343	6.86	34.09	1.37	131							
427	6.36	34.20	0.69	116							
511	5.78	34.27	0.41	104							
596	5.50	34.34	0.31	96							

PAOLINA-T; July 18, 1959; 2311 GCT; 30°16'N, 121°07'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 12°. 97.90

2	18.18	33.64	5.13	372	0	(18.18)	(33.64)	(5.13)	(24.21)	(372)	(0.00)
12	18.03	33.62	5.16	370	10	18.05	33.62	5.15	24.22	370	0.04
31	17.94	33.62	5.00	368	20	17.99	33.62	5.12	24.24	369	0.07
41	17.72	33.64	5.30	361	30	17.95	33.62	5.00	24.25	368	0.11
55	17.26	33.62	5.25	352	50	17.42	33.63	5.29	24.38	355	0.18
70	16.74	33.60	5.23	342	75	16.56	33.60	5.26	24.57	338	0.27
94	15.79	33.66	5.40	317	100	15.51	33.68	5.37	24.87	309	0.35
113	14.74	33.71	5.22	292	150	10.67	33.59	4.41	25.75	225	0.49
132	12.16	33.58	4.69	251	200	8.91	33.82	3.29	26.23	180	0.59
151	10.66	33.59	4.40	224	250	8.10	33.97	2.38	26.48	156	0.68
180	9.38	33.73	3.79	194	300	7.54	34.03	2.10	26.60	145	0.76
214	8.64	33.87	2.95	172	400	6.56	34.12	1.14	26.81	125	0.90
243	8.19	33.96	2.45	159	500	5.86	34.28	0.51	27.02	105	1.02
292	7.63	34.02	2.15	147	600	(5.39)	(34.31)	(0.43)	(27.10)	(97)	(1.12)
346	7.06	34.07	1.57	135							
429	6.31	34.16	0.90	119							
513	5.79	34.29	0.46	103							
599	5.40	34.31	0.43	97							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

100.30 PAOLINA-T; July 17, 1959; 0147 GCT; 31°41'N, 116°46.5'W; sounding, 240 fm; wind, 290°, force 4; weather, cloudy; sea, moderate; wire angle, 14°.

2	18.21	33.63	6.66	374	0	(18.21)	(33.63)	(6.66)	(24.19)	(374)	(0.00)
22	12.66	33.57	4.71	261	10	13.86	33.58	5.17	25.14	283	0.03
46	11.12	33.62	4.06	230	20	12.68	33.57	4.72	25.38	261	0.06
71	10.46	33.70	3.63	213	30	12.32	33.57	4.58	25.44	255	0.09
95	10.10	33.86	3.33	196	50	10.97	33.63	3.97	25.74	226	0.13
134	9.58	33.85	3.08	188	75	10.39	33.72	3.56	25.91	210	0.19
172	9.27	34.02	2.26	171	100	10.02	33.86	3.32	26.07	195	0.24
221	9.24	34.14a)	1.69	161	150	9.41	33.91	2.80	26.22	180	0.34
269	9.11	34.27	1.16	150	200	9.25	34.08	1.94	26.38	166	0.42
372	8.32	34.33a)	0.74	133	250	9.20	34.22	1.31	26.50	154	0.50
					300	8.90	34.31	0.96	26.61	143	0.58

100.40 PAOLINA-T; July 17, 1959; 0751 GCT; 31°21'N, 117°27'W; sounding, 1050 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 10°.

2	20.76	33.74	5.21	428	0	(20.76)	(33.74)	(5.21)	(23.62)	(428)	(0.00)
12	20.76	33.72	5.37	429	10	20.76	33.72	5.35	23.62	428	0.04
32	16.39	33.68	5.76	329	20	20.50	33.71	5.40	23.67	423	0.08
41	14.22	33.62	5.43	288	30	16.80	33.68	5.73	24.57	338	0.12
56	12.17	33.64	-	247	50	12.82	33.63	4.31	25.38	260	0.18
70	11.02	33.66	3.60	226	75	10.78	33.68	3.57	25.80	220	0.24
95	10.04	33.76	3.40	202	100	9.91	33.78	3.36	26.04	198	0.30
114	9.50	33.82	3.28	189	150	8.86	33.88	2.97	26.29	174	0.39
133	9.10	33.84	3.20	182	200	8.16	34.09	2.03	26.56	149	0.47
152	8.83	33.89	2.93	172	250	7.58	34.16	1.63	26.70	135	0.54
181	8.42	34.02	2.30	158	300	7.08	34.18	1.20	26.78	127	0.61
215	7.98	34.13	1.85	143	400	6.49	34.29	0.55	26.96	111	0.74
244	7.64	34.16	1.69	136	500	5.98	34.33	0.41	27.05	102	0.85
293	7.14	34.17	1.23	129	600	(5.50)	(34.42)	(0.32)	(27.18)	(89)	(0.95)
347	6.68	34.24	0.94	118							
430	6.37	34.31	0.44	108							
513	5.90	34.34	0.41	100							
598	5.51	34.42	0.32	90							

100.50 PAOLINA-T; July 17, 1959; 1502 GCT; 30°54.5'N, 118°12.5'W; sounding, 950 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 05°.

2	18.55	33.71	5.17	376	0	(18.55)	(33.71)	(5.17)	(24.17)	(376)	(0.00)
12	18.44	33.69	5.24	375	10	18.47	33.69	5.23	24.18	375	0.04
32	17.58	33.64	5.40	358	20	18.27	33.67	5.27	24.21	372	0.08
42	16.67	33.58	5.51	342	30	17.73	33.65	5.37	24.32	361	0.11
56	15.60	33.57	5.58	320	50	16.06	33.57	5.56	24.66	329	0.18
71	14.30	33.46	5.60	301	75	13.84	33.44	5.56	25.04	293	0.26
95	11.80	33.46	4.88	254	100	11.49	33.48	4.71	25.52	246	0.33
115	10.65	33.60	4.10	224	150	9.24	33.82	3.06	26.16	185	0.44
135	9.65	33.75	3.43	196	200	8.73	34.02	2.21	26.41	163	0.52
154	9.18	33.84	2.98	182	250	7.83	34.10	1.91	26.62	143	0.60
183	8.90	33.95	2.51	170	300	7.22	34.18	1.24	26.76	129	0.67
217	8.50	34.07	1.95	155	400	6.53	34.24	0.77	26.91	116	0.80
246	7.90	34.10	1.93	144	500	5.94	34.32	0.46	27.04	103	0.91
296	7.26	34.18	1.25	130	600	5.34	34.36	0.32	27.15	92	1.02
350	6.86	34.21	0.97	122							
434	6.31	34.26	0.64	112							
519	5.84	34.33	0.40	101							
605	5.31	34.36	0.31	92							

a) Salinity bottle numbers and order differ on the data and titration sheets. They are assumed to be listed in correct order.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; July 17, 1959; 2025 GCT; 30°36'N, 118°49.5'W; sounding, 1500 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 12°. 100.60

2	18.05	33.62	5.16	371	0	(18.05)	(33.62)	(5.16)	(24.22)	(371)	(0.00)
12	17.90	33.60	5.20	368	10	17.95	33.61	5.18	24.24	369	0.04
31	16.80	33.58	5.33	345	20	17.52	33.58	5.24	24.33	360	0.07
40	16.58	33.58	5.52	340	30	16.84	33.58	5.31	24.48	346	0.11
55	16.04	33.58	5.51	328	50	16.23	33.58	5.51	24.62	332	0.18
70	15.32	33.59	5.65	312	75	15.09	33.58	5.60	24.88	308	0.26
93	14.07	33.54	5.26	290	100	13.45	33.52	5.05	25.17	280	0.33
112	12.15	33.48	4.66	258	150	9.86	33.68	3.55	25.96	205	0.45
131	10.82	33.51	4.23	234	200	8.72	33.92	2.72	26.34	170	0.55
150	9.86	33.68	3.55	205	250	8.09	34.08	1.95	26.56	148	0.63
178	9.25	33.83	2.95	185	300	7.29	34.13	1.60	26.72	134	0.70
211	8.52	33.96	2.56	164	400	6.45	34.21	0.81	26.89	117	0.84
239	8.26	34.05	2.04	154	500	5.84	34.29	0.27	27.03	104	0.95
286	7.48	34.13	1.76	137	600	(5.30)	(34.40)		(27.19)	(89)	(1.05)
339	6.85	34.14	1.20	127							
420	6.31	34.23	0.68	114							
503	5.82	34.29	0.26	104							
587	5.36	34.38	0.19	91							

PAOLINA-T; July 18, 1959; 0230 GCT; 30°17.5'N, 119°25'W; sounding, 2000 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 08°. 100.70

1	18.51	33.64	5.25	380	0	(18.51)	(33.64)	(5.25)	(24.13)	(380)	(0.00)
11	18.36	33.64	5.29	376	10	18.37	33.64	5.28	24.16	376	0.04
31	17.30	33.57	5.48	357	20	17.56	33.58	5.44	24.31	363	0.07
41	16.95	33.56	5.51	350	30	17.32	33.57	5.47	24.36	357	0.11
50	16.22	33.54	5.60	335	50	16.22	33.54	5.60	24.60	335	0.18
65	15.34	33.50	5.59	319	75	14.98	33.49	5.60	24.83	313	0.26
80	14.79	33.48	5.60	310	100	13.54	33.47	5.40	25.12	285	0.34
99	13.60	33.45	5.41	286	150	9.80	33.59	4.16	25.91	210	0.46
123	11.44	33.49	4.74	245	200	8.54	33.93	2.78	26.38	166	0.56
142	10.18	33.53	4.35	221	250	8.03	34.05	1.91	26.54	150	0.64
171	9.04	33.76	3.55	186	300	7.34	34.10	1.47	26.68	137	0.71
200	8.54	33.93	2.78	166	400	6.40	34.18	0.82	26.87	119	0.84
230	8.26	34.02	2.21	156	500	5.81	34.23	0.51	27.00	107	0.96
269	7.77	34.07	1.64	144							
328	7.00	34.13	1.33	130							
403	6.36	34.18	0.81	118							
478	5.93	34.22	0.55	110							
558	5.56	34.27	0.40	101							

PAOLINA-T; July 18, 1959; 0805 GCT; 29°56.5'N, 120°03'W; sounding, 2000 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 06°. 100.80

1	18.10	33.57	5.20	375	0	(18.10)	(33.57)	(5.20)	(24.18)	(375)	(0.00)
11	18.08	33.57	5.16	375	10	18.08	33.57	5.16	24.18	375	0.04
21	17.95	33.55	5.08	373	20	17.97	33.55	5.09	24.20	373	0.07
41	16.55	33.46	5.26	348	30	17.42	33.51	5.12	24.29	364	0.11
51	16.06	33.48	5.44	336	50	16.08	33.48	5.43	24.59	336	0.18
60	15.58	33.47	5.48	326	75	15.06	33.48	5.49	24.81	315	0.26
75	15.06	33.48	5.49	315	100	12.96	33.48	5.13	25.25	273	0.34
90	13.61	33.51	5.29	284	150	9.40	33.67	3.95	26.04	198	0.46
110	12.10	33.53	4.80	254	200	8.59	33.90	2.90	26.34	169	0.55
134	10.00	33.58	4.22	214	250	7.88	34.01	2.09	26.54	150	0.63
153	9.30	33.71	3.87	194	300	7.19	34.10	1.47	26.70	135	0.71
182	8.84	33.84	3.26	178	400	6.62	34.22	0.64	26.88	118	0.84
241	8.02	34.00	2.23	154	500	6.12	34.30	0.43	27.01	106	0.96
280	7.31	34.06	1.72	139							
339	7.02	34.17	1.06	128							
413	6.51	34.23	0.58	116							
488	6.19	34.29	0.45	107							
568	5.70	34.33	0.31	99							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
100.90	PAOLINA-T; July 18, 1959; 1404, 1604 GCT; 29°36'N, 120°40'W; sounding, 2150 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 04°, 07°.										
1	18.22	33.68	5.25	370	0	(18.22)	(33.68)	(5.25)	(24.22)	(370)	(0.00)
11	18.22	33.66	5.35	372	10	18.22	33.66	5.34	24.21	372	0.04
31	18.12	33.68	5.38	368	20	18.20	33.66	5.36	24.21	372	0.07
41	17.86	33.68	5.40	362	30	18.13	33.68	5.37	24.25	368	0.11
56	17.44	33.68	5.48	352	50	17.58	33.68	5.46	24.39	355	0.18
71	17.01	33.66	5.54	344	75	16.85	33.65	5.56	24.54	341	0.27
95	15.62	33.58	5.81	319	100	15.20	33.58	5.75	24.86	310	0.35
115	13.66	33.60	5.30	278	150	11.07	33.58	4.72	25.68	232	0.49
134	12.10	33.61	4.95	248	200	9.00	33.83	3.53	26.22	181	0.59
154	10.78	33.57	4.65	228	250	8.25	33.99	2.56	26.47	157	0.68
184	9.47	33.75	3.90	194	300	7.29	34.11	1.82	26.70	135	0.76
218	8.60	33.91	3.06	168	400	6.49	34.17	0.83	26.86	120	0.89
248	8.28	33.99	2.60	158	500	5.96	34.27	0.46	27.01	106	1.01
297	7.35	34.11	1.86	136	600	5.44	34.33	0.35	27.12	96	1.12
352	6.76	34.13	1.25	127	700	5.00	34.37	0.27	27.20	88	1.21
437	6.17	34.23	0.69	112	800	4.62	34.40	0.35	27.26	82	1.31
523	5.84	34.29	0.47	104	1000	3.96	34.43	0.57	27.36	72	1.48
608	5.31	34.35	0.31	92	1200	3.48	34.53	0.82	27.49	60	1.63
					1500	2.85	34.57	1.12	27.58	52	1.82
395a)	6.57	34.14	1.09	123	2000	2.09	34.62	1.88	27.68	42	2.11
495	6.06	34.27	0.46	108	2500	1.81	34.65	2.28	27.72	38	
594	5.51	34.33	0.34	96	3000	1.65	34.67	2.64	27.77	34	
693	5.03	34.37	0.27	88							
792	4.66	34.40	0.33	82							
990	3.98	34.43	0.56	73							
1188	3.50	34.53	0.78	61							
1386	3.08	34.56	0.98	55							
1584	2.70	34.58	1.26	50							
1781	2.37	34.61	1.55	45							
1979	2.12	34.62	1.81	42							
2176	1.96	34.63	2.02	40							
2373	1.86	34.65	2.21	38							
2570	1.77	34.65	2.28	38							
2769	1.71	34.68	2.44	35							
2968	1.66	34.67	2.58	34							
3068	1.64	34.67	2.65	34							
3167	1.62	34.67	2.65	34							
103.30	BLACK DOUGLAS; August 1, 1959; 1716 GCT; 31°05'N, 116°25'W; sounding, 40 fm; wind, 330°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.										
1	19.64	33.58	6.83	411	0	(19.64)	(33.58)	(6.83)	(23.80)	(411)	(0.00)
10	15.08	33.61	5.84	306	10	15.08	33.61	5.84	24.90	306	0.04
28	12.44	33.68	3.23	249	20	12.63	33.65	4.43	25.44	255	0.06
46	12.31	33.69	2.08	246	30	12.43	33.68	3.22	25.50	249	0.09

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; August 1, 1959; 1432 GCT; 30°57'N, 116°46'W; sounding, 950 fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 02°.											103.35
1	20.29	33.66	6.06	422	0	(20.29)	(33.66)	(6.06)	(23.69)	(422)	(0.00)
10	20.29	33.64	6.09	423	10	20.29	33.64	6.09	23.68	423	0.04
28	13.39	33.51	5.12	279	20	16.25	33.59	5.70	24.63	332	0.08
37	12.78	33.50	4.68	268	30	13.24	33.50	5.03	25.21	277	0.11
50	12.02	33.55	4.10	251	50	12.02	33.55	4.10	25.48	251	0.16
64	10.94	33.75	3.13	217	75	10.72	33.84	2.52	25.94	207	0.22
86	10.62	33.91	2.13	200	100	10.57	33.95	2.12	26.06	196	0.27
104	10.54	33.96	2.13	195	150	10.19	34.13	1.86	26.26	176	0.37
122	10.40	33.99	2.15	191	200	10.26	34.33	1.12	26.41	163	0.45
140	10.16	34.07	2.03	181	250	10.10	34.37	0.97	26.46	158	0.54
167	10.28	34.23	1.51	171	300	9.79	34.40	0.81	26.54	150	0.62
199	10.26	34.33	1.12	163	400	8.67	34.39	0.70	26.72	133	0.76
225	10.16	34.35	1.06	160	500	7.01	34.26	0.64	26.85	121	0.89
270	10.00	34.38	0.91	155							
320	9.61	34.42	0.76	146							
395	8.73	34.40	0.70	134							
472	7.49	34.27	0.67	126							
548	6.20	34.25	0.54	111							
BLACK DOUGLAS; August 1, 1959; 1110 GCT; 30°48'N, 117°06'W; sounding, 975 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 04°.											103.40
1	20.81	33.75	4.92	429	0	(20.81)	(33.75)	(4.92)	(23.61)	(429)	(0.00)
10	20.84	33.75	4.97	430	10	20.84	33.75	4.97	23.60	430	0.04
28	17.45	33.62	5.41	357	20	19.92	33.72	5.24	23.83	408	0.08
37	15.56	33.51	5.21	323	30	17.05	33.60	5.35	24.45	349	0.12
50	13.78	33.47	5.29	290	50	13.78	33.47	5.29	25.07	290	0.19
63	12.71	33.49	4.72	268	75	12.27	33.53	4.47	25.42	257	0.25
85	11.76	33.58	4.16	244	100	11.17	33.60	4.00	25.68	232	0.32
103	10.99	33.61	3.93	228	150	9.39	33.78	3.22	26.12	190	0.42
121	10.24	33.68	3.50	211	200	9.36	34.11	2.00	26.39	164	0.51
139	9.62	33.73	3.42	198	250	8.71	34.15	1.65	26.52	152	0.59
165	9.23	33.87	2.90	181	300	7.48	34.09	1.67	26.65	140	0.67
196	9.30	34.09	2.09	166	400	7.19	34.28	0.60	26.85	121	0.81
223	9.89	34.31	1.16	158	500	6.65	34.33	0.43	26.96	110	0.93
268	7.90	34.05	1.79	148							
317	7.36	34.11	1.57	136							
391	7.20	34.26	0.62	123							
468	6.92	34.33	0.46	114							
545	6.04	34.30	0.40	105							
BLACK DOUGLAS; August 1, 1959; 0508 GCT; 30°29'N, 117°46.5'W; sounding, 1450 fm; wind, 330°, force 4; weather, clear; sea, moderate; wire angle, 20°.											103.50
2	19.36	33.66	5.06	399	0	(19.36)	(33.66)	(5.06)	(23.93)	(399)	(0.00)
10	19.38	33.66	5.07	399	10	19.38	33.66	5.07	23.93	399	0.04
27	18.12	33.60	5.20	374	20	18.80	33.63	5.11	24.04	388	0.08
36	17.54	33.58	5.32	361	30	17.84	33.59	5.24	24.25	368	0.12
48	17.03	33.53	5.40	354	50	16.80	33.51	5.40	24.44	350	0.19
61	15.77	33.51	5.31	327	75	14.95	33.50	5.40	24.85	311	0.27
82	14.42	33.50	5.43	300	100	12.68	33.48	4.94	25.30	268	0.35
97	12.86	33.48	5.03	271	150	9.92	33.68	3.62	25.96	206	0.46
115	11.72	33.48	4.41	250	200	8.58	33.95	2.56	26.39	165	0.56
131	10.72	33.57	4.32	227	250	7.89	34.05	2.12	26.56	148	0.64
156	9.71	33.71	3.36	200	300	7.23	34.12	1.52	26.71	134	0.71
185	9.84	33.86	2.95	176	400	6.30	34.18	0.82	26.89	117	0.84
210	8.42	34.00	2.39	159	500	5.94	34.31	0.40	27.04	103	0.96
252	7.86	34.05	2.11	148							
297	7.26	34.11	1.55	135							
369	6.60	34.16	0.95	122							
443	6.00	34.22	0.66	111							
518	5.94	34.34	0.31	101							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

103.60 BLACK DOUGLAS; July 31, 1959; 2338 GCT; 30°06'N, 118°25.5'W; sounding, 1700 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 15°.

1	19.30	33.69	5.15	395	0	(19.30)	(33.69)	(5.15)	(23.97)	(395)	(0.00)
9	19.28	33.68	5.20	395	10	19.28	33.68	5.20	23.97	395	0.04
27	18.14	33.63	5.33	372	20	18.59	33.62	5.34	24.09	383	0.08
36	17.68	33.66	5.26	359	30	17.99	33.65	5.28	24.26	367	0.12
49	16.97	33.64	5.28	344	50	16.92	33.64	5.29	24.51	343	0.19
61	16.54	33.65	5.41	334	75	15.47	33.61	5.44	24.82	314	0.27
83	14.66	33.60	5.41	298	100	13.02	33.57	4.71	25.30	268	0.34
100	13.02	33.57	4.71	268	150	9.73	33.64	4.17	25.96	206	0.46
117	11.70	33.58	4.81	243	200	8.70	33.91	3.10	26.33	170	0.56
134	10.65	33.58	4.61	225	250	7.93	34.06	2.26	26.56	148	0.64
159	9.40	33.73	3.86	194	300	7.29	34.11	1.76	26.69	136	0.72
188	8.88	33.86	3.33	176	400	6.56	34.24	0.87	26.91	116	0.85
213	8.50	33.96	2.80	163	500	5.97	34.29	0.49	27.02	105	0.96
255	7.86	34.07	2.20	146							
302	7.28	34.11	1.75	136							
375	6.72	34.23	1.06	119							
450	6.22	34.26	0.66	110							
526	5.84	34.32	0.40	101							

103.70 BLACK DOUGLAS; July 31, 1959; 1757 GCT; 29°46'N, 119°05.5'W; sounding, 1850 fm; wind, 360°, force 4; weather, overcast; sea, moderate; wire angle, 03°.

2	19.02	33.61	4.97	395	0	(19.02)	(33.61)	(4.97)	(23.97)	(395)	(0.00)
10	19.04	33.62	4.98	394	10	19.04	33.62	4.98	23.98	394	0.04
29	18.38	33.60	5.14	380	20	18.83	33.62	5.05	24.03	389	0.08
37	17.72	33.61	5.25	363	30	18.31	33.60	5.16	24.14	378	0.12
51	17.18	33.55	5.14	355	50	17.20	33.55	5.14	24.38	356	0.19
64	16.76	33.55	5.22	347	75	16.32	33.55	5.36	24.58	337	0.28
86	15.84	-	5.43		100	15.16	33.55	5.28	24.84	312	0.36
104	14.92	33.56	5.23	306	150	10.68	33.58	4.25	25.75	225	0.50
121	13.21	33.60	5.01	269	200	8.97	33.83	3.11	26.23	180	0.60
138	11.94	33.58	4.57	247	250	8.00	34.03	2.27	26.54	151	0.68
165	9.90	33.64	3.96	208	300	7.32	34.11	1.69	26.69	136	0.76
196	9.08	33.82	3.17	183	400	6.43	34.20	0.98	26.88	118	0.89
222	8.48	33.96	2.67	163	500	5.78	34.31	0.50	27.07	100	1.00
265	7.78	34.05	2.09	146							
314	7.19	34.13	1.56	132							
389	6.52	34.18	1.04	120							
465	5.97	34.28	0.63	105							
541	5.58	34.34	0.40	96							

103.80 BLACK DOUGLAS; July 31, 1959; 1219 GCT; 29°26.5'N, 119°45.5'W; sounding, 1800 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 11°.

0	18.50	33.57	5.31	385	0	18.50	33.57	5.31	24.07	385	0.00
10	18.52	33.55	5.34	387	10	18.52	33.55	5.34	24.05	387	0.04
28	17.74	33.49	5.47	373	20	18.30	33.53	5.37	24.09	383	0.08
54	16.64	33.45	5.62	351	30	17.64	33.48	5.48	24.21	372	0.11
63	16.37	33.48	5.48	343	50	16.79	33.45	5.64	24.39	355	0.19
76	15.98	33.49	5.61	333	75	16.00	33.49	5.60	24.61	334	0.27
89	15.58	33.51	5.63	323	100	14.94	33.53	5.65	24.87	309	0.36
102	14.74	33.53	5.64	305	150	10.49	33.57	4.37	25.77	223	0.49
123	12.26	33.53	4.97	257	200	8.94	33.78	3.44	26.19	183	0.59
140	11.89	33.55	4.49	231	250	8.11	33.98	2.52	26.48	156	0.68
166	9.99	33.60	4.25	212	300	7.52	34.04	1.96	26.62	143	0.76
192	9.09	33.74	3.57	189	400	6.52	34.14	1.06	26.83	123	0.89
218	8.66	33.87	3.11	172	500	5.87	34.23	0.57	26.98	108	1.02
261	7.96	34.00	2.36	152							
309	7.42	34.05	1.88	142							
383	6.68	34.13	1.19	126							
458	6.12	34.21	0.70	113							
535	5.70	34.25	0.49	105							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; July 31, 1959; 0645 GCT; 29°06'N, 120°25'W; sounding, 2000 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 02°.											103.90
2	19.56	33.93	4.90	384	0	(19.56)	(33.93)	(4.90)	(24.08)	(384)	(0.00)
11	19.57	33.92	4.98	395	10	19.57	33.92	4.98	24.07	385	0.04
29	19.51	33.93	4.99	383	20	19.56	33.91	5.00	24.07	385	0.08
37	19.26	33.95	5.08	375	30	19.51	33.93	4.99	24.09	383	0.12
51	18.98	33.97	5.01	367	50	18.99	33.97	5.01	24.26	367	0.19
64	18.76	34.00	5.13	360	75	18.46	33.99	5.19	24.41	353	0.28
87	17.81	33.91	5.20	344	100	17.29	33.95	4.83	24.66	329	0.37
105	17.04	33.96	4.67	323	150	11.99	33.58	4.42	25.51	248	0.52
123	15.64	33.89	5.03	297	200	9.54	33.69	3.67	26.03	199	0.63
140	13.17	33.66	4.68	264	250	8.29	33.89	2.47	26.39	165	0.72
166	10.84	33.55	4.16	231	300	7.58	34.03	1.95	26.60	145	0.80
198	9.61	33.68	3.71	201	400	6.86	34.16	1.00	26.80	126	0.94
224	8.74	33.80	3.01	179	500	6.10	34.25	0.47	26.96	110	1.07
269	8.00	33.96	2.19	156							
319	7.40	34.06	1.85	141							
395	6.90	34.16	1.02	127							
471	6.32	34.22	0.60	114							
547	5.72	34.27	0.26	103							
BLACK DOUGLAS; July 28, 1959; 0430 GCT; 30°26'N, 116°11'W; sounding, 340 fm; wind, 270°, force 4; weather, clear; sea, moderate; wire angle, 05°.											107.32
1	19.84	33.59	7.68a)	416	0	(19.84)	(33.59)		(23.75)	(416)	(0.00)
9	18.73	33.59	8.30b)	389	10	18.48	33.59		24.10	383	0.04
27	14.02	33.66	4.40c)	281	20	15.95	33.63		24.74	322	0.08
36	12.62	33.57	4.23	260	30	13.30	33.59		25.26	272	0.10
45	12.36	33.65	3.66	250	50	12.18	33.66	3.73	25.54	245	0.16
54	11.95	33.67	3.78	241	75	10.78	33.75	3.38	25.86	215	0.21
63	11.26	33.67	3.68	229	100	10.32	33.76	3.35	25.96	206	0.27
76	10.75	33.75	3.39	214	150	10.49	33.96	2.19	26.08	194	0.37
90	10.58	33.75	3.43	211	200	10.31	34.15	1.80	26.26	177	0.46
104	10.28	33.80	3.24	203	250	9.96	34.28	1.24	26.42	162	0.55
126	10.58	33.98	2.48	194	300	9.45	34.29	1.07	26.51	153	0.63
153	10.48	33.96	2.16	194	400	7.96	34.23	1.00	26.70	135	0.78
184	10.42	34.09	1.93	184	500	(6.92)	(34.27)		(26.88)	(118)	(0.91)
229	10.06	34.25	1.46	166							
274	9.82	34.31	1.06	158							
367	8.36	34.23	1.09	141							
457	7.34	34.25	0.80	125							

a) Alternate value 8.08 ml/L.
b) Alternate value 8.48 ml/L.
c) Alternate value 4.65 ml/L.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
107.35	BLACK DOUGLAS; July 28, 1959; 0230 GCT; 30°20'N, 116°23'W; sounding, 900 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 11°.										
0	20.56	33.64	5.71	430	0	20.56	33.64	5.71	23.60	430	0.00
8	20.16	33.65	5.78	419	10	19.75	33.65	5.80	23.82	409	0.04
26	15.64	33.58	5.78	320	20	16.80	33.60	5.87	24.50	344	0.08
35	14.84	33.58	5.43	303	30	15.32	33.58	5.64	24.83	313	0.11
48	13.12	33.51	4.81	274	50	13.00	33.53	4.76	25.28	270	0.17
61	11.86	33.64	4.24	241	75	10.76	33.72	3.58	25.84	217	0.23
82	10.36	33.75	3.31	207	100	10.00	33.86	2.85	26.08	194	0.28
100	10.00	33.86	2.85	194	150	10.38	34.17	1.63	26.26	177	0.38
116	10.00	33.95	2.47	187	200	10.11	34.25	1.28	26.37	167	0.46
134	10.40	34.13	1.78	180	250	9.99	34.33	1.00	26.46	158	0.55
159	10.33	34.18	1.59	175	300	9.42	34.38	0.94	26.59	146	0.63
188	10.17	34.22	1.44	170	400	8.13	34.36	0.70	26.78	128	0.77
214	10.08	34.29	1.15	163	500	7.00	34.26	0.69	26.86	120	0.90
256	9.96	34.34	0.99	157							
304	9.35	34.38	0.92	145							
376	8.38	34.38	0.78	130							
451	7.62	34.31	0.63	125							
528	6.64	34.25	0.75a)	117							
107.40	BLACK DOUGLAS; July 27, 1959; 2336 GCT; 30°10'N, 116°43.5'W; sounding, 1500 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 10°.										
1	20.82	33.66	5.21	436	0	(20.82)	(33.66)	(5.21)	(23.54)	(436)	(0.00)
10	19.96	33.64	5.73	415	10	19.96	33.64	5.73	23.76	415	0.04
27	17.27	33.58	5.43	356	20	18.59	33.61	5.51	24.08	384	0.08
36	16.02	33.57	5.43	329	30	16.90	33.57	5.43	24.46	348	0.12
49	14.50	33.48	5.42	303	50	14.40	33.48	5.40	24.95	302	0.18
62	12.88	33.57	4.13	265	75	11.34	33.64	3.69	25.68	232	0.25
84	10.49	33.67	3.56	215	100	9.81	33.70	3.47	26.00	202	0.31
102	9.76	33.71	3.46	201	150	9.93	34.10	2.00	26.28	175	0.40
119	9.60	33.77	3.32	194	200	9.00	34.10	2.03	26.44	160	0.49
137	9.65	33.96	2.58	181	250	8.56	34.18	1.60	26.58	147	0.57
163	10.16	34.21	1.51	170	300	8.60	34.36	0.79	26.70	135	0.64
195	9.10	34.11	2.02	161	400	7.51	34.34	0.55	26.85	121	0.77
221	8.68	34.12	1.96	154	500	6.65	34.34	0.36	26.97	109	0.89
266	8.56	34.23	1.33	144							
314	8.60	34.40	0.65	132							
390	7.60	34.34	0.57	122							
465	6.96	34.34	0.39	113							
545	6.27	34.34	0.31	105							
107.45	BLACK DOUGLAS; July 27, 1959; 2037 GCT;[b] 30°00'N, 117°03.5'W; sounding, 800 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 02°.										
4	20.94	33.77	5.09	431	0	(21.00)	(33.78)	(5.07)	(23.58)	(432)	(0.00)
13	20.79	33.74	5.12	429	10	20.83	33.75	5.11	23.61	429	0.04
31	19.18	33.69	5.45	392	20	20.58	33.71	5.19	23.66	425	0.09
35	17.78	33.66	5.99	361	30	19.27	33.69	5.43	23.97	395	0.13
40	16.40	33.60	6.18	335	50	14.75	33.58	5.88	24.95	301	0.20
44	15.41	33.55	6.06	317	75	11.17	33.58	3.89	25.66	234	0.26
49	14.94	33.58	5.99	305	100	10.03	33.77	3.42	26.01	201	0.32
53	13.82	33.55	5.15	285	150	8.99	33.91	2.71	26.29	174	0.41
58	13.02	33.55	4.52	270							
62	12.40	33.57	4.14	257							
66	12.06	33.55	4.13	252							
71	11.56	33.55	4.08	243							
75	11.17	33.58	3.89	234							
80	10.84	33.60	3.92	227							
85	10.55	33.61	3.80	221							
89	10.34	33.70	3.63	211							
139	9.15	33.88	2.87	179							
183	8.57	33.98	2.37	163							

a) Alternate value, 0.90 ml/L, not used in interpolation.

b) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; July 27, 1959; 1710 GCT; 29°50.5'N, 117°23.5'W; sounding, 1450 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 03°. 107.50

2	19.35	33.66	5.29	399	0	(19.35)	(33.66)	(5.29)	(23.93)	(399)	(0.00)
10	19.29	33.64	5.12	399	10	19.29	33.64	5.12	23.93	399	0.04
29	17.46	33.56	5.50	361	20	18.18	33.59	5.35	24.16	376	0.08
38	17.25	33.57	5.34	356	30	17.43	33.56	5.49	24.32	361	0.12
51	16.22	33.50	5.52	338	50	16.29	33.50	5.52	24.55	340	0.18
65	15.45	33.49	5.41	322	75	14.37	33.45	5.33	24.94	303	0.27
87	13.00	33.44	5.12	277	100	11.71	33.45	4.74	25.46	253	0.34
105	11.36	33.46	4.58	246	150	9.26	33.73	3.45	26.10	192	0.45
122	10.22	33.57	4.01	219	200	8.30	33.97	2.55	26.45	159	0.54
140	9.53	33.66	3.67	201	250	7.61	34.04	2.16	26.59	145	0.62
166	8.85	33.82	3.01	179	300	7.60	34.18	1.28	26.70	135	0.69
197	8.33	33.96	2.56	161	400	7.01	34.25	0.61	26.85	121	0.82
224	7.96	34.00	2.45	152	500	6.33	34.33	0.45	27.00	106	0.94
268	7.49	34.06	1.94	142							
317	7.65	34.23	0.99	131							
392	7.07	34.25	0.62	122							
468	6.54	34.32	0.48	110							
545	6.02	34.33	0.43	103							

BLACK DOUGLAS; July 27, 1959; 1105 GCT; 29°31'N, 118°05'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 05°. 107.60

1	20.78	34.14	4.84	400	0	(20.78)	(34.14)	(4.84)	(23.92)	(400)	(0.00)
10	20.80	34.11	4.78	402	10	20.80	34.11	4.78	23.89	402	0.04
28	20.66	34.13	4.73	397	20	20.77	34.11	4.75	23.90	401	0.08
37	19.79	34.04	4.92	382	30	20.62	34.14	4.74	23.96	395	0.12
50	18.33	33.86	5.18	359	50	18.33	33.86	5.18	24.34	359	0.20
63	17.65	33.84	5.01	345	75	16.91	33.77	5.10	24.62	333	0.28
85	16.38	33.76	5.18	323	100	15.78	33.77	5.11	24.88	308	0.36
103	15.58	33.78	5.07	304	150	11.39	33.71	3.43	25.72	228	0.50
120	14.01	33.75	4.60	274	200	9.67	33.98	2.45	26.23	179	0.60
137	12.46	33.68	4.18	250	250	9.13	34.17	1.70	26.47	157	0.69
164	10.46	33.80	2.85	206	300	9.17	34.35	0.86	26.60	144	0.77
194	9.76	33.95	2.55	183	400	7.70	34.32	0.65	26.81	125	0.91
221	9.40	34.05	2.18	170	500	6.76	34.31	0.46	26.94	113	1.04
265	9.12	34.23	1.47	153							
313	9.18	34.38	0.76	142							
388	7.81	34.33	0.68	126							
464	7.08	34.31	0.49	118							
540	6.42	34.34	0.43	107							

BLACK DOUGLAS; July 27, 1959; 0542 GCT; 29°11'N, 118°43'W; sounding, 1700 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 07°. 107.70

2	21.55	–	4.72		0	(21.55)	(34.13)	(4.72)	(23.70)	(420)	(0.00)
11	21.07	34.13	4.85	408	10	21.07	(34.13)	4.85	(23.83)	(408)	(0.04)
29	21.02	34.14	4.80	406	20	21.04	34.14	4.81	23.85	406	0.08
37	19.82	34.05	4.69a)	382	30	21.02	34.14	4.80	23.85	406	0.12
51	18.48	33.83	5.06	365	50	18.53	33.84	5.04	24.27	366	0.20
64	17.96	33.84	5.14	352	75	17.20	33.82	5.16	24.58	336	0.29
86	16.40	33.78	5.16	322	100	15.61	33.74	5.06	24.89	307	0.37
104	15.28	33.73	5.00	301	150	11.30	33.68	3.82	25.71	229	0.50
121	13.46	33.68	4.53	268	200	10.38	34.02	2.28	26.15	188	0.61
139	11.85	33.67	4.05	239	250	9.44	34.22	1.56	26.45	159	0.70
166	10.70	33.72	3.45	216	300	8.72	34.27	1.37	26.62	143	0.78
196	10.36	33.97	2.41	191	400	7.70	34.29	0.59	26.78	127	0.92
223	10.66	34.34	1.54	170	500	6.70	34.32	0.46	26.95	112	1.04
268	9.04	34.22	1.56	153							
316	8.57	34.29	1.22	139							
391	7.80	34.29	0.62	129							
467	7.02	34.31	0.48	117							
544	6.28	34.33	0.45	106							

a) Alternate value, 5.15 ml/L, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
107.80	BLACK DOUGLAS; July 26, 1959; 2355 GCT; 28°51.5'N, 119°22.5'W; sounding, 1900 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.										
0	21.15	34.00	4.79	419	0	21.15	34.00	4.79	23.72	419	0.00
9	20.60	34.00	4.87	405	10	20.59	34.00	4.87	23.87	404	0.04
27	20.40	34.01	4.80	399	20	20.50	34.01	4.84	23.89	402	0.08
36	19.70	33.92	4.94	388	30	20.27	34.00	4.81	23.95	397	0.12
49	18.78	33.86	5.08	370	50	18.69	33.85	5.10	24.24	369	0.20
63	17.60	33.72	5.33	353	75	17.00	33.72	5.26	24.56	339	0.29
85	16.48	33.74	5.18	326	100	15.79	33.74	4.87	24.85	311	0.37
104	15.52	33.73	4.76	306	150	11.60	33.66		25.64	236	0.51
122	14.11	33.68	4.50	281	200	9.69	33.86	3.13	26.14	189	0.62
140	12.52	33.66	4.24	252	250	8.57	33.98	2.50	26.42	162	0.71
166	10.60	33.68	-	217	300	7.88	34.06	2.08	26.58	147	0.79
198	9.73	33.85	3.19	190	400	7.60	34.30	0.77	26.80	126	0.93
225	9.08	33.94	2.66	173	500	6.76	34.34	0.44	26.96	111	1.06
270	8.26	34.03	2.36	155							
320	7.71	34.09	1.85	142							
396	7.62	34.29	0.80	127							
472	7.04	34.33	0.50	116							
552	6.12	34.36	0.35	101							
107.90	BLACK DOUGLAS; July 26, 1959; 1828 GCT; 28°32.5'N, 120°01.5'W; sounding, 2100 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 03°.										
2	19.80	33.81	5.18	399	0	(19.80)	(33.81)	(5.18)	(23.93)	(399)	(0.00)
11	19.54	33.80	4.95	393	10	19.54	33.79	4.98	23.98	394	0.04
29	19.51	34.05	5.38	374	20	19.52	33.85	5.01	24.03	389	0.08
38	19.06	34.02	5.20	366	30	19.50	34.06	5.37	24.20	373	0.12
51	18.62	33.96	5.13	359	50	18.67	33.97	5.13	24.33	360	0.19
65	18.16	34.00	5.25	346	75	17.78	34.06	5.25	24.63	332	0.28
88	17.16	34.07	5.19	317	100	16.00	33.98	4.96	24.98	298	0.36
106	15.47	33.93	4.89	290	150	11.93	33.70	4.27	25.62	238	0.49
124	13.95	33.80	4.69	269	200	9.44	33.83	3.29	26.15	188	0.60
142	12.56	33.73	4.34	247	250	8.53	33.97	2.54	26.41	163	0.69
168	10.68	33.69	4.05	218	300	8.07	34.10	1.83	26.58	147	0.77
198	9.50	33.82	3.32	189	400	7.63	34.27	0.58	26.78	128	0.92
226	8.93	33.91	2.80	173	500	6.65	34.33	0.41	26.96	110	1.04
271	8.28	34.04	2.24	154							
321	7.99	34.15	1.49	142							
396	7.68	34.27	0.60	129							
473	6.84	34.33	0.42	113							
548	6.33	34.33	0.37	106							
110.33	BLACK DOUGLAS; July 24, 1959; 2212 GCT; 29°50.5'N, 115°52'W; sounding, 50 fm; wind, 280°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.										
0	20.16	33.73	5.39	414	0	20.16	33.73	5.39	23.77	414	0.00
9	19.54	33.73	5.68	398	10	19.50	33.73	5.69	23.94	397	0.04
27	16.17	33.68	5.94	324	20	18.49	33.70	5.85	24.18	375	0.08
45	13.61	33.66	4.18	272	30	15.53	33.66	5.72	24.85	311	0.11
68	11.43	33.67	3.62	232	50	13.13	33.66	3.98	25.36	263	0.17

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; July 24, 1959; 2338 GCT; 29°46.5'N, 116°00'W; sounding, 550 fm; wind, 280°, force 1; weather, partly cloudy; sea, moderate; wire angle, 17°.											110.35
1	20.73	33.78	4.86	425	0	(20.73)	(33.78)	(4.86)	(23.66)	(425)	(0.00)
10	18.78	33.69	5.12	383	10	18.78	33.69	5.12	24.10	383	0.04
28	17.21	33.66	5.20	348	20	17.89	33.68	5.15	24.30	363	0.08
36	16.60	33.59	5.29	340	30	17.09	33.66	5.23	24.48	346	0.11
50	14.86	-	5.36		50	14.86	33.50	5.36	24.87	309	0.18
62	13.75	33.52	5.00	286	75	13.01	33.59	4.61	25.32	266	0.25
83	12.50	33.64	4.30	253	100	11.36	33.71	3.64	25.72	228	0.31
100	11.36	33.71	3.64	228	150	9.57	33.92	2.77	26.20	182	0.42
117	10.73	33.77	3.43	212	200	9.06	34.09	2.15	26.42	162	0.50
133	10.16	33.86	2.92	196	250	9.58	34.32	0.95	26.52	153	0.58
157	9.35	33.95	2.73	177	300	8.32	34.22	1.31	26.64	141	0.66
187	8.65	34.94	2.66	167	400	7.69	34.33	0.70	26.81	125	0.80
212	9.47	34.23	1.67	158	500	6.89	34.34	0.37	26.94	113	0.92
254	9.57	34.33	0.92	152							
301	8.30	34.22	1.31	141							
374	7.77	34.29	0.85	128							
449	7.48	34.36	0.48	119							
530	6.48	34.32	0.32	109							
BLACK DOUGLAS; July 25, 1959; 0225 GCT; 29°36.5'N, 116°19.5'W; sounding, 1250 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 03°.											110.40
1	20.42	33.73	4.86	420	0	(20.42)	(33.73)	(4.86)	(23.70)	(420)	(0.00)
10	20.24	33.73	4.99	416	10	20.24	33.73	4.99	23.75	416	0.04
32	17.33	33.62	5.59	354	20	19.60	33.70	5.18	23.90	402	0.08
41	15.72	33.58	5.76	322	30	17.75	33.63	5.54	24.31	362	0.12
54	13.86	33.53	4.91	287	50	14.30	33.52	5.25	25.01	296	0.19
68	12.88	33.58	4.02	264	75	12.40	33.58	3.95	25.43	256	0.26
90	11.36	33.58	3.75	237	100	10.77	33.62	3.55	25.77	224	0.32
108	10.32	33.68	3.33	212	150	9.00	33.84	2.96	26.24	179	0.42
129	9.55	33.77	3.13	193	200	9.16	34.15	1.75	26.45	159	0.50
152	8.99	33.86	2.92	178	250	8.50	34.20	1.23	26.60	145	0.58
179	9.37	34.09	2.07	167	300	7.91	34.25	0.99	26.72	133	0.65
214	8.98	34.18	1.57	154	400	7.09	34.26	0.55	26.85	121	0.78
242	8.62	34.20	1.27	147	500	6.33	34.30	0.49	26.98	108	0.90
286	8.04	34.25	1.07	135	600	(5.79)	(34.34)		(27.08)	(99)	(1.02)
345	7.53	34.26	0.71	128							
435	6.80	34.27	0.50	117							
515	6.24	34.32	0.48	106							
583	5.88	34.34	0.32	100							
BLACK DOUGLAS; July 25, 1959; 0731 GCT; 29°18'N, 116°58'W; sounding, 1440 fm; wind, 270°, force 2; weather, overcast; sea, moderate; wire angle, 20°.											110.50
2	20.70	33.75	4.90	426	0	(20.70)	(33.75)	(4.90)	(23.64)	(426)	(0.00)
10	20.48	33.75	5.00	421	10	20.48	33.75	5.00	23.69	421	0.04
27	18.04	33.64	5.18	369	20	19.10	33.68	5.11	24.01	391	0.08
35	17.33	-	5.29		30	17.72	33.63	5.23	24.30	363	0.12
48	16.20	33.57	5.41	332	50	16.00	33.56	5.44	24.66	329	0.19
60	14.64	33.53	5.42	303	75	12.88	33.51	4.49	25.29	269	0.26
80	12.21	33.51	4.22	257	100	10.92	33.57	3.84	25.70	230	0.33
97	11.04	33.57	3.85	233	150	9.41	33.80	2.92	26.13	189	0.44
113	10.50	33.59	3.78	222	200	9.06	34.18	1.66	26.48	156	0.52
130	9.95	33.69	3.48	205	250	8.64	34.25	1.27	26.60	144	0.60
154	9.32	33.82	2.79	186	300	8.08	34.23	0.93	26.68	137	0.67
182	9.08	34.05	2.08	166	400	6.29	34.18	0.83	26.90	117	0.80
206	9.04	34.20	1.57	154	500	5.69	34.25	0.49	27.02	105	0.92
247	8.68	34.24	1.30	145							
293	8.18	34.24	0.94	138							
363	6.62	34.16	0.89	123							
437	6.04	34.21	0.74	112							
512	5.62	34.26	0.40	103							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
110.60	BLACK DOUGLAS; July 25, 1959; 1237 GCT; 28°59'N, 117°38'W; sounding, 1800 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 13°.										
0	19.34	33.69		396	0	19.34	33.69		23.96	396	0.00
8	19.36	33.68	4.91	398	10	19.36	33.67	4.91	23.94	398	0.04
26	18.03	33.68	5.17	366	20	18.53	33.70	5.16	24.16	376	0.08
34	17.70	33.66	5.08	360	30	17.82	33.66	5.08	24.32	362	0.12
48	17.20	33.60	5.19	353	50	17.08	33.58	5.22	24.43	351	0.19
61	16.36	33.55	5.25	338	75	15.69	33.59	5.21	24.76	320	0.27
82	15.32	33.59	5.18	312	100	14.10	33.66	4.61	25.15	282	0.35
100	14.10	33.66	4.61	282	150	10.45	33.71	4.00	25.89	212	0.47
117	12.90	33.64	4.35	261	200	9.63	34.02	2.26	26.27	176	0.57
135	11.06	33.60	4.34	230	250	9.72	34.35	1.10	26.52	153	0.66
160	10.08	33.77	3.62	202	300	9.38	34.41	0.82	26.62	143	0.73
191	9.60	33.93	2.59	182	400	8.16	34.38	0.53	26.79	127	0.87
217	9.78	34.20	1.69	165	500	6.83	34.35	0.44	26.95	111	1.00
261	9.69	34.38	1.00	151							
308	9.30	34.42	0.78	141							
383	8.40	34.39	0.56	130							
458	7.37	34.36	0.49	118							
534	6.43	34.33	0.40	108							
110.70	BLACK DOUGLAS; July 26, 1959; 0100 GCT; 28°36.5'N, 118°18'W; sounding, 1600 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 04°.										
0	21.05	33.76		434	0	21.05	33.76		23.56	434	0.00
9	20.10	33.77	4.84	409	10	20.02	33.77	4.84	23.84	408	0.04
27	18.46	33.66	5.05	377	20	19.10	33.69	4.93	24.02	390	0.08
35	17.92	33.63	5.14	367	30	18.12	33.62	5.10	24.20	372	0.12
49	17.85	33.78	5.15	354	50	17.82	33.78	5.15	24.40	353	0.19
62	17.34	33.79	5.11	342	75	16.70	33.78	5.10	24.67	328	0.28
84	16.14	33.78	5.06	316	100	15.08	33.75	4.82	25.01	295	0.36
102	14.90	33.75	4.76	292	150	11.09	33.71	3.60	25.78	222	0.48
119	13.42	33.80	4.19	259	200	10.07	33.97	2.32	26.16	186	0.59
137	11.65	33.68	3.94	235	250	9.53	34.18	1.60	26.42	162	0.68
164	10.66	33.76	3.23	212	300	9.14	34.30	1.29	26.57	148	0.76
194	10.12	33.94	2.42	190	400	7.72	34.30	0.78	26.79	127	0.90
221	9.82	34.07	2.03	175	500	6.71	34.31	0.50	26.94	112	1.03
265	9.40	34.24	1.42	156							
314	9.00	34.31	1.23	145							
388	7.84	--	0.86	-							
465	7.05	34.31	0.50	117							
541	6.32	34.31	0.54	108							
110.80	BLACK DOUGLAS; July 26, 1959; 0552 GCT; 28°18'N, 118°57'W; sounding, 2050 fm; wind, 270°, force 3; weather, clear; sea, moderate; wire angle, 03°.										
2	22.04	34.25		425	0	(22.04)	(34.25)		(23.65)	(425)	(0.00)
11	21.90	34.24	4.79	422	10	21.92	34.24		23.68	422	0.04
29	19.64	33.92	5.20	387	20	20.70	34.06	4.99	23.88	404	0.08
38	19.19	33.87	5.28	379	30	19.61	33.91	5.22	24.06	386	0.12
51	18.54	33.94	5.25	359	50	18.60	33.94	5.25	24.33	360	0.20
65	17.96	33.87	5.56	350	75	17.26	33.85	5.40	24.59	336	0.28
87	16.44	33.86	5.11	317	100	15.62	33.87	4.89	24.98	298	0.37
106	15.02	33.86	4.75	287	150	11.10	33.70	3.79	25.27	223	0.50
123	12.64	33.72	4.21	250	200	9.57	33.92	3.00	26.20	182	0.60
142	11.55	33.69	3.87	232	250	9.39	34.22	1.66	26.46	158	0.69
167	10.28	33.76	3.66	206	300	8.83	34.31	1.25	26.62	143	0.76
198	9.60	33.91	3.03	184	400	7.51	34.32	0.66	26.84	122	0.90
225	9.38	34.04	2.41	170	500	6.72	34.36	0.41	26.98	108	1.02
270	9.42	34.33	1.31	150							
321	8.40	34.27	1.21	139							
396	7.56	34.32	0.68	123							
473	6.92	34.36	0.45	112							
549	6.32	34.36	0.38	104							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; July 26, 1959; 1051, 1234 GCT; 28°01'N, 119°36'W; sounding, 2050 fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 04°, 05°.											110.90
1	21.50	33.92	-	434	0	(21.50)	(33.92)		(23.56)	(434)	(0.00)
10	21.24	33.93	4.82	427	10	21.24	33.93	4.82	23.63	427	0.04
28	20.00	33.82	5.02	403	20	20.60	33.87	4.91	23.77	414	0.08
37	19.60	33.80	5.09	395	30	19.92	33.82	5.04	23.90	401	0.13
50	18.04	33.72	5.34	363	50	18.04	33.72	5.34	24.30	363	0.20
64	15.92	33.63	5.18	322	75	14.70	33.61	4.84	24.98	298	0.29
85	13.54	33.60	4.39	276	100	12.06	33.64	3.60	24.54	245	0.36
103	11.90	33.65	3.55	242	150	10.13	33.91	2.56	26.10	192	0.47
121	11.36	33.71	3.49	228	200	9.48	34.08	2.03	26.34	169	0.56
138	10.51	33.84	2.83	204	250	8.77	34.17	1.61	26.54	151	0.64
164	9.84	33.97	2.34	183	300	8.23	34.22	1.20	26.65	140	0.72
194	9.53	34.05	2.11	172	400	6.82	34.21	0.85	26.85	121	0.85
222	9.19	34.16	1.76	159	500	6.08	34.29	0.44	27.01	106	0.97
266	8.58	34.18	1.52	148	600	5.55	34.34	0.28	27.12	96	1.08
315	8.08	34.23	1.08	137	700	5.13	34.40	0.30	27.20	87	1.18
390	6.91	34.21	0.87	123	800	4.69	34.42	0.37	27.27	81	1.28
466	6.40	34.27	0.64	112	1000	3.99	34.47	0.50	27.39	70	1.44
541	5.82	-	0.42		1200	3.49	34.51	0.82	27.47	62	1.59
					1500	2.84	34.54	1.11	27.56	54	1.80
439a)	6.42	34.23	0.61	115	2000	(2.10)	(34.60)		(27.67)	(43)	(2.09)
526	5.92	34.31	0.36	103							
614	5.51	34.36	0.26	94							
701	5.12	34.40	0.30	87							
789	4.74	34.42	0.36	81							
876	4.38	34.42	0.49	77							
964	4.10	34.47	0.47	71							
1052	3.85	34.49	0.67	67							
1140	3.62	34.51	0.79	64							
1229	3.42	34.51	0.83	62							
1316	3.19	34.51	0.88	59							
1405	3.00	34.52	0.99	57							
1494	2.85	34.54	1.10	54							
1583	2.68	34.57	1.28	51							
1672	2.50	34.58	1.44	48							
1761	2.38	34.58	1.49	47							
1853	2.22	34.60	1.73	45							
1943	2.13	34.60	1.76	44							
BLACK DOUGLAS; July 24, 1959; 1309 GCT; 29°22.5'N, 115°17.5'W; sounding, 30 fm; wind, 360°, force 1; weather, fog; sea, slight; wire angle, 00°.											113.30
1	16.76	33.68	5.80	337	0	(16.76)	(33.68)	(5.80)	(24.58)	(337)	(0.00)
10	16.27	33.67	5.89	327	10	16.27	33.67	5.89	24.68	327	0.03
28	13.42	33.68	3.35	267	20	14.40	33.67	4.33	25.10	287	0.06
37	13.00	33.68	3.25	260	30	13.35	33.68	3.33	25.32	266	0.09

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

113.35 BLACK DOUGLAS; July 24, 1959; 0946 GCT; 29°12'N, 115°39'W; sounding, 550 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 30°.

1a)	19.86	33.71	6.19	407	0	(19.86)	(33.71)	(6.19)	(23.84)	(407)	(0.00)
30	18.72	33.66	5.22	384	10	19.84	33.71	6.18	23.84	407	0.04
37	16.72	33.58	5.45	343	20	19.69	33.70	5.99	23.87	404	0.08
48	16.03	33.57	5.51	329	30	18.72	33.66	5.22	24.08	384	0.12
60	15.68	33.64	5.54	317	50	16.06	33.57	5.51	24.66	329	0.19
76	13.94	33.58	4.76	285	75	13.99	33.58	4.80	25.11	286	0.27
90	13.10	33.64	3.93	264	100	12.02	33.67	3.90	25.57	242	0.34
103	11.78	33.68	3.89	237	150	9.79	33.85	3.31	26.11	191	0.45
123	10.78	33.66	3.80	221	200	9.13	34.07	2.56	26.40	164	0.54
141	10.10	33.81	3.30	199	250	8.79	34.22	1.49	26.56	148	0.62
168	9.17	33.87	3.38	180	300	7.92	34.20	1.43	26.68	137	0.69
185	8.96	33.94	3.24	171	400	7.52	34.32	0.70	26.83	123	0.83
219	9.26	34.20	1.88	157	500	(6.82)	(34.38)		(26.97)	(109)	(0.95)
341	7.52	34.23	1.35	130							
416	7.51	34.34	0.65	122							
480	7.04	34.38	0.61	112							

113.40 BLACK DOUGLAS; July 24, 1959; 0632 GCT; 29°02'N, 115°58.5'W; sounding, 1000 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 25°.

1	20.30	33.76	5.00	415	0	(20.30)	(33.76)	(5.00)	(23.76)	(415)	(0.00)
10	20.32	33.74	5.06	417	10	20.32	33.74	5.06	23.74	417	0.04
27	18.44	33.66	5.28	377	20	19.70	33.71	5.16	23.88	404	0.08
35	17.91	33.64	5.35	366	30	18.20	33.64	5.32	24.21	372	0.12
46	17.10	33.58	5.44	352	50	16.89	33.56	5.48	24.46	348	0.19
58	16.49	33.55	5.53	341	75	15.73	33.66	5.41	24.80	316	0.28
78	15.71	33.69	5.37	313	100	14.00	33.67	4.85	25.18	280	0.35
93	14.88	33.71	5.05	295	150	10.61	33.69	3.80	25.85	216	0.48
109	12.85	33.61	4.61	262	200	10.10	34.07	2.06	26.23	180	0.58
125	11.96	33.62	4.38	245	250	8.94	34.10	2.01	26.45	159	0.66
149	10.63	33.69	3.84	217	300	8.38	34.22	1.37	26.63	142	0.74
200	10.10	34.07	2.06	180	400	7.53	34.29	0.75	26.81	125	0.88
240	9.06	34.07	2.11	164	500	6.79	34.34	0.37	26.95	111	1.01
285	8.57	34.21	1.48	146							
354	7.82	34.23	1.11	134							
426	7.38	34.33	0.53	120							
500	6.79	34.34	0.37	111							

113.50 BLACK DOUGLAS; July 24, 1959; 0055 GCT; 28°42'N, 116°37.5'W; sounding, 1800 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.

1	20.46	33.72	4.84	422	0	(20.46)	(33.72)	(4.84)	(23.69)	(422)	(0.00)
9	20.48	33.74	5.06	422	10	20.48	33.74	5.06	23.69	422	0.04
28	19.08	33.72	5.19	388	20	20.20	33.73	5.15	23.77	414	0.08
36	18.67	33.83	5.20	370	30	18.94	33.75	5.19	24.10	382	0.12
49	18.33	33.87	5.33	359	50	18.32	33.87	5.34	24.35	359	0.20
62	17.43	-	5.37		75	16.65	33.66	5.34	24.59	336	0.28
85	15.88	33.61	5.26	322	100	15.08	33.67	5.00	24.96	301	0.37
102	15.16	33.70	4.99	301	150	10.57	33.66	4.16	25.81	220	0.50
120	13.94	33.70	4.49	276	200	9.54	33.98	2.53	26.26	178	0.60
137	11.85	33.63	4.46	242	250	9.09	34.16	1.46	26.47	157	0.69
163	10.13	33.71	3.74	207	300	8.61	34.29	1.01	26.65	140	0.76
193	9.65	33.96	2.64	181	400	7.62	34.34	1.05	26.83	123	0.90
221	9.22	34.03	2.23	169	500	6.61	34.34	0.46	26.98	109	1.02
265	9.00	34.22	1.12	152							
314	8.44	34.31	1.01	137							
389	7.76	34.34	1.08	124							
464	6.92	34.34	0.44	113							
540	6.24	34.34	0.49	104							

a) The Nansen bottle at 12 meters failed to trip, but it released its messenger at an undetermined time. Nevertheless, the depth determination method does not indicate a noticeable error.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; July 23, 1959; 1945 GCT; 28°28'N, 117°17'W; sounding, 1900 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 06°. 113.60

2	20.36	33.75	4.90	417	0	(20.36)	(33.75)	(4.90)	(23.74)	(417)	(0.00)
10	20.35	33.74	4.90	418	10	20.35	33.74	4.90	23.73	418	0.04
29	19.16	-	5.21		20	20.10	33.74	5.03	23.80	412	0.08
55	17.83	33.74	5.20	357	30	19.13	33.74	5.21	24.05	387	0.12
64	17.13	33.72	5.35	343	50	18.14	33.74	5.21	24.29	364	0.20
77	16.50	33.68	5.45	331	75	16.60	33.69	5.44	24.62	333	0.29
91	15.64	33.58	5.33	320	100	15.10	33.62	5.32	24.91	306	0.37
104	14.96	33.68	5.17	298	150	10.59	33.62	4.13	25.80	221	0.50
127	12.94	33.66	4.68	260	200	9.15	33.84	3.09	26.21	182	0.60
145	10.84	33.60	4.21	227	250	8.51	34.06	2.20	26.48	156	0.69
171	9.72	33.71	3.71	201	300	8.09	34.19	1.61	26.64	141	0.77
198	9.20	33.83	3.10	184	400	7.48	34.31	0.85	26.83	123	0.90
223	8.68	33.96	2.80	166	500	6.57	34.32	0.50	26.97	109	1.03
268	8.50	34.13	1.84	151							
317	7.87	34.20	1.47	136							
394	7.51	34.30	0.89	124							
470	6.78	34.31	0.53	113							
545	6.30	34.33	0.50	106							

BLACK DOUGLAS; July 23, 1959; 1407 GCT; 28°06.5'N, 117°56'W; sounding, 1600 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 06°. 113.70

1	20.53	33.89	4.94	411	0	(20.53)	(33.89)	(4.94)	(23.80)	(411)	(0.00)
9	20.54	33.91	4.94	410	10	20.54	33.91	4.94	23.81	410	0.04
28	19.02	33.91	5.14	373	20	20.00	33.93	4.97	23.97	395	0.08
36	18.48	33.83	5.19	366	30	18.84	33.88	5.15	24.22	370	0.12
50	17.92	33.82	5.26a)	353	50	17.96	33.82	5.26	24.41	353	0.19
63	17.28	33.77	5.29	342	75	16.41	33.62	5.34	24.61	334	0.28
86	15.81	33.57	5.42	324	100	15.51	33.73	5.23	24.90	306	0.36
103	15.42	33.78	5.17	300	150	11.59	33.67	3.80	25.66	234	0.50
121	13.96	33.70	4.85	276	200	9.83	33.92	2.67	26.16	187	0.60
139	12.68	33.68	3.83	254	250	8.93	34.08	2.26	26.43	161	0.69
166	10.56	33.68	3.78	216	300	8.46	34.21	1.53	26.61	144	0.77
197	9.90	33.91	2.70	189	400	7.48	34.25	0.94	26.78	128	0.92
224	9.38	33.97	2.55	176	500	6.42	34.31	0.47	26.98	109	1.04
268	8.69	34.14	2.00	153							
318	8.36	34.23	1.37	141							
394	7.54	34.25	0.96	128							
469	6.62	34.29	0.60	113							
545	6.22	34.34	0.32	104							

BLACK DOUGLAS; July 23, 1959; 0810 GCT; 27°44'N, 118°35'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, moderate; wire angle, 05°. 113.80

2	22.10	34.20	4.74	430	0	(22.10)	(34.20)	(4.74)	(23.60)	(430)	(0.00)
10	22.12	34.23	4.81	428	10	22.12	34.23	4.81	23.62	428	0.04
29	20.46	34.27	5.05	382	20	21.60	34.26	4.93	23.78	413	0.08
37	20.13	34.32	5.09	370	30	20.44	34.29	5.06	24.12	380	0.12
51	18.86	34.09	5.29	356	50	18.94	34.11	5.28	24.37	357	0.20
64	17.62	33.93	5.36	338	75	17.35	34.01	5.29	24.69	326	0.28
87	16.54	34.00	5.10	309	100	15.70	33.92	4.97	25.01	296	0.36
104	14.96	33.87	4.77	284	150	11.13	33.72	3.67	25.78	223	0.50
123	13.44	33.76	4.30	262	200	9.73	34.01	2.48	26.25	178	0.60
140	11.60	33.69	3.85	233	250	9.51	34.29	1.36	26.49	155	0.68
167	10.46	33.81	3.27	205	300	9.18	34.39	0.86	26.64	141	0.76
199	9.74	34.01	2.50	179	400	7.92	34.40	0.49	26.84	122	0.90
225	9.52	34.19	1.97	162	500	6.68	34.34	0.44	26.96	110	1.02
270	9.64	34.38	1.04	150							
319	8.84	34.38	0.75	137							
395	8.00	34.41	0.49	122							
470	6.95	34.33	0.48	114							
547	6.34	34.38	0.33	103							

a) Mean value of 5.19 and 5.32 ml/L.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

113.90 BLACK DOUGLAS; July 23, 1959; 0237 GCT; 27°23'N, 119°14'W; sounding, 2100 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.

0	21.33	33.91	4.66	430	0	21.33	33.91	4.66	23.60	430	0.00
9	21.33	33.93	4.81	429	10	21.33	33.93	4.86	23.62	428	0.04
27	19.64	33.82	5.01	395	20	20.66	33.91	4.93	23.78	413	0.08
35	19.45	33.84	5.13	388	30	19.58	33.80	5.03	23.98	394	0.12
49	18.89	33.80	5.39	378	50	18.79	33.79	5.41	24.17	376	0.20
62	17.54	33.71	5.49	353	75	16.07	33.71	5.19	24.76	320	0.29
84	14.92	33.67	4.87	298	100	13.40	33.68	4.41	25.32	267	0.36
102	13.24	33.68	4.39	264	150	10.30	33.76	3.47	25.96	206	0.48
120	11.76	33.68	4.26	237	200	8.90	33.97	2.68	26.36	168	0.58
137	10.78	33.68	3.92	220	250	8.63	34.16	1.63	26.55	150	0.66
164	9.80	33.84	2.96	192	300	8.12	34.22	1.22	26.67	138	0.73
195	8.96	33.95	2.74	171	400	7.23	34.28	0.73	26.84	122	0.87
222	8.76	34.08	2.15	158	500	6.19	34.32	0.56	27.01	106	0.99
266	8.54	34.20	1.41	146							
315	7.94	34.23	1.14	135							
390	7.32	34.27	0.79	124							
466	6.45	34.33	0.54	108							
546	5.87	34.29	0.65	104							

117.26 BLACK DOUGLAS; July 21, 1959; 0740 GCT; 28°56'N, 114°41'W; sounding, 40 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

2	20.08	33.71	6.04	413	0	(20.10)	(33.71)		(23.78)	(413)	(0.00)
10	19.72	33.70a)	5.45	405	10	19.72	33.70		23.86	405	0.04
29	12.43	33.67a)	3.10	250	20	16.40	33.67		24.66	329	0.08
46	11.42	33.68	3.49	231	30	12.28	33.67		25.52	247	0.11

117.30 BLACK DOUGLAS; July 21, 1959; 0929 GCT; 28°48'N, 114°56.5'W; sounding, 50 fm; wind, 260°, force 2; weather, cloudy; sea, moderate; wire angle, 02°.

0	18.64	33.62	5.52	385	0	18.64	33.62	5.52	24.07	385	0.00
9	17.43	33.62	6.21	357	10	17.42	33.62	6.21	24.38	356	0.04
27	15.16	33.59	5.89	309	20	16.90	33.61	6.24	24.49	345	0.07
44	13.16	33.51	4.88	275	30	14.80	33.58	5.72	24.94	302	0.10
68	11.36	33.66	3.56	231	50	12.65	33.53	4.53	25.35	264	0.16

117.35 BLACK DOUGLAS; July 21, 1959; 1212 GCT; 28°38'N, 115°16'W; sounding, 120 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 00°.

0	20.23	33.72	5.14	416	0	20.23	33.72	5.14	23.74	416	0.00
18	18.91	33.65	5.41	388	10	19.50	33.66	5.28	23.89	403	0.04
27	16.34	33.58	5.58	335	20	18.88	33.65	5.42	24.04	388	0.08
45	14.60	33.48	5.55	305	30	16.01	33.55	5.59	24.66	329	0.12
63	12.66	33.51	4.85	266	50	13.93	33.47	5.43	25.04	293	0.18
85	11.34	33.67	4.01	230	75	11.88	33.59	4.35	25.54	245	0.25
108	10.60	33.80	3.36	208	100	10.77	33.73	3.63	25.86	215	0.30
131	10.66	34.11	1.97	186	150	10.62	34.22	1.74	26.26	177	0.40
157	10.61	34.25	1.71	175							

a) This salinity bottle number not in agreement with number on data sheet. Since standard handling and titrating procedures were used, this salinity value is assumed to be listed correctly.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

BLACK DOUGLAS; July 21, 1959; 1442 GCT; 28°28'N, 115°35.5'W; sounding, 500 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 08°. 117.40

1	20.59	33.72	5.03	425	0	(20.59)	(33.72)	(5.03)	(23.65)	(425)	(0.00)
9	20.62	33.75	5.02	424	10	20.62	33.75	5.02	23.66	424	0.04
28	17.02	33.59	5.39	350	20	18.00	33.61	5.30	24.23	370	0.08
36	16.74	33.58	5.34	344	30	16.98	33.59	5.37	24.46	348	0.12
49	15.60	33.53	5.45	323	50	15.53	33.53	5.45	24.75	321	0.18
63	14.46	33.54	5.40	298	75	13.66	33.52	5.05	25.13	284	0.26
85	12.76	33.50	4.58	268	100	11.28	33.67	4.08	25.71	229	0.33
102	11.04	33.68	4.00	225	150	10.82	34.21	1.58	26.21	182	0.43
120	10.58	33.87	2.96	202	200	11.29	34.47	0.86	26.34	170	0.52
137	10.63	34.13	1.94	184	250	10.66	34.46	0.84	26.44	160	0.60
164	11.12	34.30	1.25	179	300	10.21	34.48	0.78	26.54	151	0.68
194	11.34	34.47	0.84	171	400	8.40	34.41	0.53	26.78	128	0.83
221	10.89	34.44	0.92	166	500	7.04	34.36	0.40	26.92	114	0.95
266	10.54	34.47	0.81	157							
315	10.05	34.49	0.77	148							
391	8.54	34.42	0.55	130							
466	7.52	34.38	0.42	118							
544	6.45	34.34	0.36	107							

BLACK DOUGLAS; July 22, 1959; 0125 GCT; 28°08'N, 116°15'W; sounding, 2200 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 04°. 117.50

0	21.03	33.87	4.76	426	0	21.03	33.87	4.76	23.64	426	0.00
9	20.66	33.82	5.09	419	10	20.60	33.81	5.13	23.72	418	0.04
27	18.72	33.85	5.31	369	20	19.54	33.81	5.32	23.99	393	0.08
36	18.44	33.87	5.22	361	30	18.61	33.87	5.29	24.27	366	0.12
49	18.04	33.77	5.38	360	50	18.01	33.76	5.39	24.34	359	0.19
62	17.32	33.73	5.40	345	75	16.20	33.74	5.39	24.75	321	0.28
89a)	15.42	33.75	5.32	303	100	14.38	33.73	4.96	25.16	282	0.36
102	14.04	33.71	4.88	278	150	10.91	33.90	2.81	25.95	206	0.48
120	12.04	33.71	3.98	240	200	9.95	34.02	2.60	26.22	181	0.57
137	11.34	33.87	3.08	215	250	9.28	34.21	1.77	26.48	156	0.66
164	10.54	33.93	2.67	197	300	8.93	34.31	1.17	26.61	144	0.74
195	10.02	34.00	2.66	184	400	7.75	34.33	0.71	26.81	125	0.88
221	9.54	34.15	2.13	165	500	6.63	34.30	0.60	26.94	112	1.00
266	9.16	34.24	1.55	152							
314	8.84	34.34	1.05	140							
389	7.86	34.33	0.72	127							
465	7.04	34.31	0.64	117							
542	6.13	34.29	0.50	107							

BLACK DOUGLAS; July 22, 1959; 0630 GCT; 27°47.5'N, 116°54'W; sounding, 1750 fm; wind, 270°, force 4; weather, partly cloudy; sea, moderate; wire angle, 02°. 117.60

2	21.22	33.78	4.91	437	0	(21.22)	(33.78)	(4.91)	(23.53)	(437)	(0.00)
10	21.19	33.76	4.94	438	10	21.19	33.76	4.94	23.52	438	0.04
29	18.25	33.66	5.34b)	372	20	19.95	33.68	5.15	23.79	412	0.09
37	18.04	33.68	5.25	366	30	18.23	33.66	5.32	24.21	372	0.12
51	17.44	33.73	5.38	349	50	17.49	33.73	5.37	24.44	350	0.20
65	16.72	33.66	5.38	338	75	16.10	33.60	5.40	24.67	328	0.28
87	15.21	33.53	5.41	314	100	14.24	33.66	5.03	25.12	285	0.36
105	13.69	33.69	4.78	272	150	11.54	33.89	2.68	25.83	218	0.48
123	12.10	33.67	4.20	244	200	10.72	34.16	1.78	26.18	184	0.59
141	11.83	33.86	2.73	225	250	10.39	34.42	0.82	26.45	158	0.68
168	11.00	33.93	2.57	205	300	9.83	34.46	0.56	26.58	146	0.76
200	10.72	34.16	1.78	184	400	8.29	34.37	0.59	26.75	130	0.90
226	11.22	34.50	0.70	167	500	7.01	34.34	0.42	26.92	114	1.03
271	10.01	34.42	0.87	153							
322	9.68	34.48	0.51	143							
397	8.32	34.55u	0.60								
474	7.32	34.34	0.46	119							
549	6.46	34.37	0.31	105							

a) Alternate depth, 85 meters, not used in interpolation.
b) Mean value of 5.26 and 5.42 ml/L.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
117.70	BLACK DOUGLAS; July 22, 1959; 1135 GCT; 27°27.5'N, 117°32.5'W; sounding, 1800 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 07°.										
1	21.34	33.73	4.76	444	0	(21.34)	(33.73)	(4.76)	(23.45)	(444)	(0.00)
9	21.38	33.76	4.95	442	10	21.38	33.76	4.99	23.47	442	0.04
28	19.06	33.69	5.56	390	20	20.40	33.74	5.43	23.72	419	0.09
36	18.07	33.66	5.47	368	30	18.80	33.68	5.55	24.08	384	0.13
50	17.07	33.60	5.42	350	50	17.07	33.60	5.42	24.44	350	0.20
64	16.41	33.58	5.68a)	336	75	15.32	33.56	5.55	24.81	315	0.28
85	14.29	33.58	5.33	292	100	13.19	33.69	4.93	25.36	262	0.36
103	12.92	33.69	4.84	257	150	10.29	33.79	3.36	25.98	204	0.48
120	11.75	33.67	4.22	237	200	9.50	34.00	2.25	26.28	175	0.57
138	10.40	33.71	3.67	211	250	9.14	34.21	1.43	26.49	155	0.66
164	10.18	33.89	2.87	194	300	8.74	34.32	0.92	26.65	140	0.73
194	9.58	-	2.31		400	7.81	34.34	0.57	26.81	125	0.87
220	9.31	34.11	1.89	164	500	6.64	34.35	0.37	26.98	109	0.99
265	9.04	34.25	1.21	150							
313	8.67	34.35	0.83	137							
387	8.00	34.35	0.60	127							
463	6.94	34.33	0.47	114							
539	6.46	34.38	0.26	104							
117.80	BLACK DOUGLAS; July 22, 1959; 1640 GCT; 27°07'N, 118°12'W; sounding, 2100 fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 06°.										
2	21.82	33.96	4.81	440	0	(21.82)	(33.96)	(4.81)	(23.50)	(440)	(0.00)
10	21.81	33.97	4.86	439	10	21.81	33.97	4.86	23.51	439	0.04
29	20.56	34.20	5.03	389	20	21.30	34.04	5.00	23.70	420	0.09
37	20.40	34.23	5.02	383	30	20.53	34.20	5.03	24.03	389	0.13
51	19.90	34.23	5.07	371	50	19.91	34.23	5.07	24.22	371	0.20
64	19.71	34.32	5.00	360	75	18.94	34.23	5.09	24.47	347	0.29
86	17.78	34.04	5.20	334	100	16.85	33.99	5.10	24.80	316	0.38
103	15.89	33.96	4.92	297	150	11.67	33.79	3.76	25.73	227	0.51
120	14.00	33.86	4.61	266	200	9.94	34.04	2.51	26.23	180	0.62
138	12.46	33.78	4.19	242	250	9.17	34.20	1.88	26.49	155	0.70
165	10.86	33.84	3.21	209	300	8.66	34.30	1.32	26.64	140	0.78
195	10.03	34.01	2.61	184	400	7.78	34.38	0.59	26.84	122	0.92
222	9.60	34.14	2.18	167	500	6.58	34.36	0.57	27.00	107	1.04
265	8.96	34.22	1.74	150							
315	8.57	34.34	1.08	136							
389	7.94	34.39	0.59	124							
465	6.88	34.35	0.60	112							
540	6.26	34.38	0.50	102							
117.90	BLACK DOUGLAS; July 22, 1959; 2205 GCT; 26°50'N, 118°51.5'W; sounding, 1800 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 02°.										
0	21.79	34.00	4.87	436	0	21.79	34.00	4.87	23.54	436	0.00
9	21.50	33.96	4.86	432	10	21.49	33.96	4.86	23.59	431	0.04
27	19.58	33.89	5.12	388	20	21.08	33.94	4.89	23.68	422	0.09
36	19.15	33.88	5.20	378	30	19.41	33.89	5.15	24.08	384	0.13
49	18.56	33.86	5.23	365	50	18.52	33.86	5.23	24.29	364	0.20
63	17.96	33.87	5.26	350	75	17.31	33.86	5.26	24.59	336	0.29
85	16.68	33.84	5.24	324	100	14.49	33.72	4.76	25.12	286	0.37
102	14.24	-	4.69		150	10.88	33.76	3.52	25.85	216	0.50
121	12.70	33.68	4.24	254	200	9.77	34.08	2.22	26.30	173	0.59
138	11.40	33.69	3.82	230	250	9.76	34.28	1.49	26.45	159	0.68
166	10.32	33.86	3.06	199	300	9.35	34.36	1.15	26.58	147	0.76
197	9.77	34.07	2.24	175	400	8.49	34.46	0.33	26.79	126	0.90
224	9.76	34.18	1.89	166	500	6.87	34.43	0.23	27.01	106	1.02
269	9.76	34.36	1.22	153							
318	9.14	34.36	1.12	144							
393	8.58	34.45	0.36	128							
470	7.46	34.46	0.21	111							
546	5.92	34.40	0.35	96							

a) Mean value of 5.62 and 5.75 ml/L.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; July 21, 1959; 1655 GCT; 28°18.5'N, 115°24'W; sounding, 150 fm; wind, 300°, force 1; weather, cloudy; sea, slight; wire angle, 02°. 118.39

0	20.86	-	5.26		0	20.86	(33.73)	5.26	(23.59)	(431)	(0.00)
8	20.86	33.73	5.22	431	10	20.84	33.73	5.23	23.59	431	0.04
27	16.90	33.62	5.52	344	20	18.40	33.65	5.44	24.17	376	0.08
45	14.38	33.52	5.56	298	30	16.45	33.60	5.52	24.59	336	0.12
68	12.12	33.55	4.50	252	50	13.80	33.53	5.34	25.11	286	0.18
90	10.96	33.62	4.03	227	75	11.97	33.57	4.44	25.51	248	0.25
112	10.48	33.77	3.18	208	100	10.68	33.67	3.70	25.82	219	0.31
148	10.21	33.96	2.49	190	150	10.21	33.97	2.43	26.12	189	0.41
184	10.75	34.34	1.31	171	200	10.58	34.35	1.27	26.38	166	0.50
229	10.07	34.31	1.26	162							

BLACK DOUGLAS; July 20, 1959; 0925 GCT; 28°19'N, 114°53'W; sounding, 60 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 04°. 119.33

1	21.56	33.77	5.05	446	0	(21.56)	(33.77)	(5.05)	(23.43)	(446)	(0.00)
9	21.58	33.77	5.06	447	10	21.58	33.77	5.06	23.42	447	0.04
28	20.32	33.75	5.42	416	20	21.03	33.76	5.25	23.56	434	0.09
45	17.79	33.71	5.58	358	30	20.00	33.74	5.49	23.82	409	0.13
69	13.43	33.67	3.98	268	50	16.85	33.70	5.34	24.57	338	0.21

BLACK DOUGLAS; July 21, 1959; 0245 GCT; 28°23'N, 114°14.5'W; sounding, 30 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°. 120.25

0	20.80	33.77	5.24	427	0	20.80	33.77	5.24	23.63	427	0.00
9	20.22	33.69	5.51	418	10	20.19	33.69	5.51	23.74	417	0.04
27	15.32	33.64	5.44	308	20	17.00	33.65	5.50	24.50	344	0.08
36	14.26	33.62	4.64	289	30	15.05	33.64	5.31	24.94	303	0.11

BLACK DOUGLAS; July 21, 1959; 0002 GCT; 28°13'N, 114°34'W; sounding, 48 fm; wind, 320°, force 3; weather, partly cloudy; sea, slight; wire angle, 03°. 120.30

1	22.52	33.79	5.04	471	0	(22.56)	(33.79)	(5.04)	(23.17)	(471)	(0.00)
9	21.79	33.75	4.98	454	10	21.72	33.75	4.98	23.36	453	0.05
28	19.47	33.74	5.68	396	20	21.26	33.74	5.08	23.49	441	0.09
45	13.87	33.64	4.44	279	30	19.00	33.74	5.63	24.07	385	0.13

BLACK DOUGLAS; July 20, 1959; 0711 GCT; 28°03'N, 114°54'W; sounding, 40 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°. 120.35

2	21.56	33.80	5.06	444	0	(21.56)	(33.80)	(5.06)	(23.45)	(444)	(0.00)
11	21.58	33.77	5.06	447	10	21.58	33.77	5.06	23.42	447	0.04
29	19.61	33.77	5.56	397	20	21.56	33.77	5.12	23.43	446	0.09
47	16.26	33.66	5.47	328	30	19.58	33.77	5.56	23.95	397	0.13

BLACK DOUGLAS; July 20, 1959; 0145 GCT; 27°43'N, 115°33'W; sounding, 1190 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 10°. 120.45

1	21.79	33.84	4.87	448	0	(21.79)	(33.84)	(4.87)	(23.41)	(448)	(0.00)
10	21.70	33.80	4.97	448	10	21.70	33.80	4.97	23.41	448	0.04
28	17.54	33.75	5.50	349	20	21.27	33.79	5.20	23.52	438	0.09
36	16.48	33.71	5.48	329	30	17.25	33.73	5.50	24.50	344	0.13
49	14.88	33.73	4.99	293	50	14.65	33.72	4.90	25.08	289	0.19
62	13.06	33.71	4.28	259	75	12.06	33.71	4.23	25.59	240	0.26
85	11.70	33.77	4.20	229	100	11.23	33.87	2.99	25.87	214	0.32
103	11.20	33.89	2.74	212	150	11.27	34.35	1.22	26.24	179	0.41
119	11.35	34.14	1.82	196	200	11.02	34.55	0.50	26.44	160	0.50
137	11.27	34.25	1.49	186	250	10.24	34.47	0.56	26.52	152	0.58
163	11.22	34.42	0.98	173	300	9.60	34.47	0.51	26.63	142	0.66
194	11.06	34.54	0.53	161	400	8.29	34.41	0.40	26.79	127	0.80
221	10.88	34.56	0.44	157	500	7.16	(34.38)	0.15	(26.93)	(114)	(0.92)
264	9.90	34.43	0.66	150							
313	9.49	34.49	0.46	139							
387	8.43	34.42	0.42	129							
463	7.76	34.42	0.28	118							
539	6.53	-	0.06								

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

120.50 BLACK DOUGLAS; July 19, 1959; 2211 GCT; 27°33'N, 115°52.5'W; sounding, 2000 fm; wind, 360°, force 2; weather, overcast; sea, moderate; wire angle, 05°.

1	21.24	33.77	5.28	439	0	(21.24)	(33.77)	(5.28)	(23.51)	(439)	(0.00)
10	20.68	33.75	5.30	425	10	20.68	33.75	5.30	23.65	425	0.04
33	16.90	33.69	5.38	339	20	17.99	33.69	5.37	24.29	364	0.08
41	15.34	33.73	4.90	302	30	17.20	33.69	5.38	24.48	346	0.12
55	13.48	33.69	4.34	268	50	14.05	33.69	4.56	25.18	279	0.18
68	12.14	-	3.62		75	12.14	33.76	3.60	25.62	238	0.24
90	10.68	33.72	3.73	215	100	10.66	33.83	3.35	25.94	207	0.30
108	10.25	33.85	2.99	199	150	9.57	33.98	2.48	26.25	178	0.40
126	10.08	33.91	2.77	192	200	9.28	34.19	1.78	26.46	158	0.48
152	9.53	33.99	2.47	177	250	9.28	34.32	1.20	26.56	148	0.56
179	9.38	34.13	2.03	164	300	8.54	34.32	1.06	26.68	137	0.64
214	9.27	34.23	1.60	155	400	7.71	34.36	0.57	26.83	123	0.77
241	9.36	34.31	1.24	150	500	6.85	34.36	0.38	26.96	111	0.89
286	8.72	34.32	1.10	140	600	(6.20)	(34.41)		(27.08)	(99)	(1.00)
343	8.04	34.33	0.83	129							
433	7.47	34.36	0.44	119							
513	6.73	34.36	0.38	109							
580	6.30	34.40	0.44	100							

120.60 BLACK DOUGLAS; July 19, 1959; 1528 GCT; 27°09.5'N, 116°37.5'W; sounding, 2000 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 09°.

1	20.50	33.72	4.95	423	0	(20.50)	(33.72)	(4.95)	(23.67)	(423)	(0.00)
10	20.52	33.73	4.94	422	10	20.52	33.73	4.94	23.68	422	0.04
33	18.28	33.73	5.19	368	20	19.34	33.71	5.04	23.97	395	0.08
41	17.98	33.81	5.31	355	30	18.43	33.72	5.16	24.20	373	0.12
55	17.52	33.80	5.28	345	50	17.71	33.81	5.29	24.45	349	0.19
68	16.40	33.79	5.22	321	75	15.63	33.78	5.16	24.92	305	0.28
90	13.40	33.68	4.91	267	100	12.43	33.67	4.65	25.49	250	0.35
107	11.82	33.67	4.35	239	150	11.73	34.31	1.17	26.12	190	0.46
126	11.38	33.91	2.82	213	200	11.28	34.41	1.00	26.28	175	0.55
152	11.77	34.33	1.11	189	250	11.03	34.54	0.51	26.43	161	0.64
179	11.25	34.31	1.27	182	300	10.62	34.55	0.40	26.51	153	0.72
214	11.32	34.48	0.80	170	400	9.32	34.50	0.35	26.69	136	0.87
241	11.11	34.54	0.53	162	500	7.91	34.48	0.32	26.90	116	1.00
285	10.76	34.55	0.43	155	600	(6.81)	(34.41)		(27.00)	(107)	(1.12)
343	10.16	34.54	0.38	146							
432	8.84	34.49	0.35	129							
513	7.74	34.47	0.31	114							
581	6.99	34.42	0.23	108							

120.70 BLACK DOUGLAS; July 19, 1959; 0935 GCT; 26°51'N, 117°13.5'W; sounding, 2050 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 32°.

1	21.22	33.75	5.09	439	0	(21.22)	(33.75)	(5.09)	(23.50)	(439)	(0.00)
9	21.26	33.72	5.18a)	443	10	21.26	33.72	5.18	23.46	443	0.04
28	17.51	33.59	5.55	360	20	18.36	33.61	5.54	24.14	378	0.08
36	16.86	33.58	5.51	346	30	17.35	33.58	5.54	24.37	357	0.12
47	16.16	33.58	5.55	331	50	15.83	33.60	5.52	24.73	323	0.19
58	14.85	33.65	5.18	298	75	13.28	33.74	4.21	25.38	260	0.26
76	13.20	33.74	4.16	259	100	11.94	33.76	3.48	25.65	235	0.33
90	12.27	33.73	3.82	243	150	10.73	34.14	1.83	26.18	185	0.43
105	11.75	33.77	3.20	230	200	9.41	34.11	2.04	26.38	166	0.52
129	10.72	33.91	2.90	202	250	9.32	34.28	1.40	26.52	152	0.60
150	10.73	34.14	1.83	185	300	9.29	34.40	0.72	26.62	143	0.68
180	10.74	34.28	1.38	175	400	8.18	34.42	0.33	26.82	124	0.82
203	9.34	34.11	2.09	165	500	6.92	34.37	0.16	26.95	112	0.94
240	9.32	34.24	1.70	155							
289	9.34	34.37	0.80	146							
365	8.65	34.43	0.37	131							
439	7.66	34.42	0.29	117							
505	6.88	34.36	0.14	112							

a) Alternate value, 4.97 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; July 19, 1959; 0351 GCT; 26°32'N, 117°49.5'W; sounding, 1850 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 05°.											120.80
1	22.06	34.04	5.12	440	0	(22.06)	(34.04)	(5.12)	(23.49)	(440)	(0.00)
10	22.06	34.05	5.08	440	10	22.06	34.05	5.08	23.49	440	0.04
28	20.18	34.09	5.33	388	20	20.74	34.05	5.24	23.86	405	0.09
37	20.29	34.28	5.38	378	30	20.18	34.10	5.34	24.05	387	0.13
50	19.14	34.02	5.51	368	50	19.14	34.02	5.51	24.26	368	0.20
64	18.79	34.03	5.48	358	75	18.09	34.02	5.53	24.52	343	0.29
85	17.85	34.06	5.57	334	100	16.92	34.03	5.45	24.81	315	0.37
105	16.48	34.00	5.36	308	150	11.30	33.72	4.36	25.74	226	0.51
121	13.97	33.78	4.72	270	200	10.15	34.01	2.50	26.18	185	0.61
138	12.38	33.73	4.58	244	250	9.70	34.27	1.43	26.46	158	0.70
164	10.56	33.80	4.00	207	300	9.19	34.38	0.80	26.63	142	0.78
196	10.22	34.00	2.57	187	400	8.13	34.40	0.41	26.81	125	0.92
223	9.78	34.13	2.18	170	500	6.93	34.40	0.29	26.98	109	1.04
267	9.68	34.35	1.14	152							
317	8.96	34.38	0.69	139							
392	8.24	34.40	0.43	127							
468	7.24	34.40	0.33	113							
544	6.50	34.40	0.23	103							
BLACK DOUGLAS; July 18, 1959; 2003, 2135 GCT; 26°13'N, 118°27.5'W; sounding, 2100 fm; wind, 270°, force 3; weather, cloudy; sea, rough; wire angle, 02°, 08°.											120.90
2	22.46	34.45	4.81	421	0	(22.46)	(34.45)	(4.81)	(23.69)	(421)	(0.00)
11	22.20	34.42	4.83	417	10	22.22	34.42	4.82	23.74	417	0.04
29	19.78	33.96	5.14	387	20	20.40	34.00	5.00	23.92	400	0.08
38	19.40	34.04	5.28	372	30	19.72	33.96	5.16	24.06	386	0.12
51	18.98	33.98	5.22	366	50	18.98	33.97	5.23	24.26	367	0.20
65	18.85	34.05	5.26	358	75	18.35	34.04	5.30	24.47	347	0.29
87	17.38	33.98	5.32	329	100	16.05	33.87	5.16	24.89	307	0.37
106	15.41	33.82	5.01	297	150	11.21	33.70	4.32	25.75	226	0.50
123	13.67	33.80	4.64	263	200	9.73	34.02	2.40	26.26	177	0.60
141	11.94	33.73	4.51	236	250	9.31	34.21	1.60	26.47	157	0.69
167	10.20	33.72	3.80	207	300	8.63	34.28	1.28	26.64	141	0.77
198	9.74	34.00	2.50	179	400	7.69	34.36	0.55	26.84	122	0.90
225	9.90	34.18	1.67	168	500	6.70	34.35	0.32	26.98	109	1.03
269	8.98	34.25	1.59	149	600	5.96	34.38	0.27	27.09	98	1.14
318	8.44	34.29	1.11	138	700	5.34	34.41	0.29	27.19	89	1.24
394	7.75	34.37	0.56	122	800	4.79	34.43	0.38	27.27	81	1.33
469	6.98	34.36	0.38	112	1000	4.15	34.50	0.63	27.40	69	1.50
547	6.26	34.40	0.26	100	1200	3.57	34.52	0.91	27.47	62	1.65
					1500	2.87	34.58	1.28	27.58	52	1.85
436a)	7.29	34.33	0.40	119	2000	(2.13)	(34.61)		(27.68)	(43)	(2.13)
524	6.54	34.34	0.28	108							
610	5.84	34.34	0.31	100							
698	5.34	34.40	0.29	89							
785	4.86	34.43	0.37	82							
873	4.52	34.43	0.41	78							
961	4.24	34.49	0.62	71							
1050	4.01	34.51	0.66	67							
1138	3.74	34.51	0.76	64							
1227	3.50	34.53	0.97	61							
1316	3.30	34.54	0.90	58							
1404	3.08	34.56	1.03	55							
1493	2.89	34.58	1.27	52							
1583	2.75	34.57	1.37	51							
1671	2.61	34.58	1.44	50							
1762	2.48	34.58	1.59	48							
1853	2.31	34.60	1.78	45							
1943	2.20	34.61	1.74	43							

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

123.37 BLACK DOUGLAS; July 17, 1959; 0612 GCT; 27°24'N, 114°39.5'W; sounding, 39 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.

1	18.08	33.75	5.91	362	0	(18.08)	(33.75)	(5.91)	(24.31)	(362)	(0.00)
10	17.05	33.70	5.67	342	10	17.05	33.70	5.67	24.53	342	0.04
29	13.71	33.72	5.09	270	20	15.15	33.69	5.32	24.96	301	0.07
47	12.25	-	4.07		30	13.65		5.05			

123.42 BLACK DOUGLAS; July 17, 1959; 1826 GCT; 27°14'N, 114°59'W; sounding, 800 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

1	21.06	33.78	4.99	433	0	(21.06)	(33.78)	(4.99)	(23.57)	(433)	(0.00)
11	20.88	33.78	5.01	428	10	20.89	33.78	5.00	23.62	428	0.04
29	17.72	33.68	5.31	359	20	19.45	33.73	5.11	23.96	396	0.08
38	16.82	33.62	5.49	343	30	17.57	33.67	5.34	24.38	356	0.12
51	15.84	33.57	5.62	325	50	15.95	33.57	5.62	24.68	327	0.19
65	14.52	33.77	4.78	282	75	13.03	33.71	4.28	25.40	258	0.26
87	11.84	33.71	3.86	236	100	11.40	33.78	3.53	25.77	223	0.32
105	11.22	33.81	3.34	218	150	11.10	34.34	1.23	26.26	177	0.43
123	11.06	34.04	2.19	198	200	11.00	34.58	0.43	26.47	157	0.51
141	11.12	34.28	1.42	181	250	10.48	34.63	0.30	26.60	145	0.59
168	11.03	34.42	0.91	170	300	9.40	34.51	0.48	26.69	136	0.66
199	11.00	34.57	0.48	158	400	8.29	34.45	0.25	26.82	124	0.80
226	10.94	34.69	0.25	148	500	7.18	34.44	0.22	26.98	109	0.92
271	9.91	34.53	0.35	143							
319	9.14	34.51	0.52	132							
395	8.33	34.45	0.27	124							
472	7.54	34.45	0.24	113							
549	6.59	34.43	0.21	102							

123.50 BLACK DOUGLAS; July 17, 1959; 2255 GCT; 27°01.5'N, 115°31'W; sounding, 2000 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 02°.

1	22.12	33.85	4.90	455	0	(22.12)	(33.85)	(4.90)	(23.34)	(455)	(0.00)
10	21.68	33.84	4.95	445	10	21.68	33.84	4.95	23.44	445	0.04
28	18.25	33.75	5.42	366	20	20.85	33.83	5.07	23.66	424	0.09
37	16.53	33.76	5.54	326	30	17.87	33.75	5.48	24.37	357	0.13
50	13.11	33.75	3.93	256	50	13.11	33.75	3.93	25.42	256	0.19
64	11.56	33.77	3.76	226	75	10.99	33.79	3.30	25.86	215	0.25
86	10.66	33.85	2.95	205	100	10.43	33.92	2.70	26.06	196	0.30
105	10.36	33.94	2.62	193	150	10.40	34.28	1.63	26.34	169	0.39
122	10.16	34.02	2.31	184	200	10.02	34.43	0.81	26.52	153	0.48
141	10.42	34.22	1.75	174	250	9.52	34.47	0.65	26.64	141	0.55
167	10.30	34.34	1.42	163	300	8.97	34.49	0.50	26.75	131	0.62
198	10.03	34.42	0.84	154	400	7.61	34.39	0.40	26.87	119	0.75
225	9.80	34.45	0.73	147	500	6.75	34.41	0.29	27.02	105	0.87
270	9.29	34.48	0.57	137							
320	8.72	34.49	0.47	127							
395	7.66	34.39	0.40	120							
474	7.02	34.42	0.31	109							
548	6.26	34.42	0.21	99							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; July 18, 1959; 0425 GCT; 26°38.5'N, 116°09'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 10°.											123.60
1	22.01	33.84	4.98	454	0	(22.01)	(33.84)	(4.98)	(23.35)	(454)	(0.00)
10	21.75	33.82	4.98	448	10	21.75	33.82	4.98	23.41	448	0.04
28	17.47	33.74	5.49	349	20	19.50	33.74	5.28	23.96	396	0.09
36	15.31	33.70	5.30	304	30	17.10	33.74	5.47	24.54	340	0.12
50	13.14	33.70	4.31	261	50	13.14	33.70	4.31	25.38	261	0.18
63	11.84	33.77	3.01	232	75	11.27	33.81	3.00	25.82	218	0.24
85	10.88	33.86	2.96	209	100	10.56	33.92	2.66	26.04	198	0.30
106	10.49	33.96	2.55	194	150	9.86	34.17	1.75	26.34	169	0.39
120	10.30	34.05	2.19	184	200	8.70	34.23	1.55	26.59	146	0.47
137	10.10	34.14	1.78	175	250	8.54	34.33	0.90	26.68	137	0.54
162	9.53	34.17	-	163	300	8.29	34.38	0.68	26.77	129	0.61
192	8.72	34.20	1.69	149	400	7.58	34.44	0.30	26.92	114	0.74
217	8.66	34.29	1.28	141	500	6.66	34.40	0.20	27.02	105	0.85
260	8.50	34.33	0.84	136							
308	8.14	34.37	0.63	128							
383	7.73	34.43	0.32	117							
458	7.02	34.44	0.29	108							
535	6.36	34.37	0.16	104							
BLACK DOUGLAS; July 18, 1959; 0950 GCT; 26°18.5'N, 116°47'W; sounding, 2000 fm; wind, 270°, force 3; weather, cloudy; sea, slight; wire angle, 05°.											123.70
2	21.70	33.78	4.87	449	0	(21.70)	(33.78)	(4.87)	(23.40)	(449)	(0.00)
11	21.72	33.79	4.88	449	10	21.72	33.79	4.88	23.40	449	0.04
29	20.00	34.09	5.34	384	20	20.25	33.90	5.27	23.88	404	0.09
37	18.50	33.86	5.32	364	30	20.02	34.11	5.34	24.10	382	0.13
51	18.03	33.89	5.37	351	50	18.05	33.88	5.36	24.42	352	0.20
65	17.28	33.86	5.45	335	75	16.77	33.83	5.30	24.70	326	0.28
87	14.55	33.75	4.32	285	100	12.91	33.75	3.86	25.46	253	0.36
105	12.49	33.75	3.77	245	150	11.00	33.95	2.61	25.96	205	0.47
123	11.60	33.76	3.51	228	200	9.53	34.10	2.03	26.35	168	0.57
140	11.12	33.84	2.94	214	250	9.41	34.37	0.96	26.58	147	0.65
166	10.82	34.09	-	190	300	9.36	34.46	0.46	26.65	140	0.72
197	9.68	34.11	2.03	170	400	8.07	34.42	0.38	26.83	123	0.86
224	8.95	34.16	1.92	155	500	6.80	34.40	0.21	27.00	107	0.98
268	9.68	34.47	0.57	144							
318	9.14	34.43	0.41	138							
394	8.14	34.42	0.39	124							
469	7.14	34.40	0.25	112							
545	6.35	34.41	0.19	100							
BLACK DOUGLAS; July 17, 1959; 0134 GCT; 26°55.5'N, 114°06'W; sounding, 44 fm; wind, 280°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.											127.34
0	17.10	33.86	6.25	331	0	17.10	33.86	6.25	24.64	331	0.00
9	16.74	33.86	6.10	323	10	16.70	33.86	6.08	24.74	322	0.03
27	12.48	33.80	3.51	241	20	14.00	33.80	4.71	25.28	270	0.06
48	12.23	33.95	2.21	226	30	12.42	33.83	3.30	25.62	238	0.09

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

127.40 BLACK DOUGLAS; July 16, 1959; 2239 GCT; 26°43.5'N, 114°29.5'W; sounding, 1400 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.

0	23.13	34.05	4.80	468	0	23.13	34.05	4.80	23.20	468	0.00
9	22.65	34.05	4.79	456	10	22.64	34.05	4.79	23.33	456	0.05
32	17.28	33.87	5.35	335	20	22.20	34.04	4.96	23.45	444	0.09
54	14.56	33.73	4.86	286	30	17.70	33.88	5.35	24.51	344	0.13
67	13.07	33.87	3.39	247	50	15.09	33.76	5.07	25.02	295	0.19
89	11.98	33.96	2.22	220	75	12.57	33.89	2.92	25.64	236	0.26
107	11.76	34.22	1.47	197	100	11.81	34.12	1.72	25.96	205	0.32
125	11.47	34.33	1.10	184	150	12.06	34.65	0.54	26.32	171	0.41
152	12.06	34.65	0.53	171	200	11.72	34.67	0.23	26.41	163	0.50
179	11.84	34.65	0.35	167	250	11.41	34.68	0.13	26.47	157	0.58
215	11.64	34.69	0.16	160	300	10.93	34.66	0.17	26.54	150	0.66
242	11.48	34.69	0.13	158	400	9.42	34.59	0.21	26.74	131	0.80
287	11.12	34.66	0.16	153	500	7.66	34.43	0.23	26.90	116	0.93
344	10.12	34.63	0.18	138	600	(6.46)	(34.43)		(27.07)	(100)	(1.05)
434	8.98	34.55	0.22	126							
515	7.42	34.42	0.23	114							
583	6.66	34.43	0.23	103							

127.50 BLACK DOUGLAS; July 16, 1959; 1654 GCT; 26°25.5'N, 115°08'W; sounding, 2000 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 14°.

2	21.78	33.79	4.93	451	0	(21.78)	(33.79)	(4.93)	(23.38)	(451)	(0.00)
10	21.18	33.95	4.99	424	10	21.18	33.95	4.99	23.67	424	0.04
28	19.94	34.08	5.11	383	20	20.40	34.03	5.08	23.94	398	0.08
36	19.44	34.05	5.11	373	30	19.82	34.08	5.11	24.12	380	0.12
50	18.92	34.00	5.15	364	50	18.92	34.00	5.15	24.30	364	0.20
63	17.62	33.92	5.17	339	75	16.35	33.90	4.83	24.85	311	0.28
85	14.92	33.78	4.40	290	100	13.03	33.75	3.83	25.44	255	0.36
102	12.87	33.76	3.74	251	150	10.81	34.11	1.96	26.14	189	0.47
119	11.89	33.79	3.23	231	200	10.39	34.32	1.13	26.38	165	0.56
136	10.93	33.94	2.53	203	250	9.63	34.37	0.97	26.54	150	0.64
161	10.74	34.20	1.63	181	300	9.11	34.42	0.70	26.66	139	0.71
191	10.44	34.31	1.20	168	400	7.93	34.40	0.43	26.83	123	0.85
216	10.26	34.33	1.08	163	500	6.84	34.38	0.35	26.98	109	0.97
257	9.54	34.38	0.97	148							
303	9.09	34.42	0.68	138							
374	8.28	34.41	0.47	127							
447	7.34	34.39	0.39	115							
522	6.64	34.38	0.32	107							

127.60 BLACK DOUGLAS; July 16, 1959; 1120 GCT; 26°04'N, 115°46.5'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 08°.

1	22.36	34.04	4.86	448	0	(22.36)	(34.04)	(4.86)	(23.41)	(448)	(0.00)
10	22.38	34.04	4.86	449	10	22.38	34.04	4.86	23.40	449	0.04
32	19.29	33.84	5.22	384	20	21.40	33.94	5.02	23.60	430	0.09
41	19.05	33.84	5.28	378	30	19.50	33.84	5.20	24.03	389	0.13
54	18.96	33.96	5.24	368	50	19.06	33.94	5.25	24.22	371	0.21
66	18.56	33.98	5.31	356	75	17.90	33.89	5.34	24.46	348	0.30
90	16.84	33.85	5.27	326	100	15.57	33.84	4.75	24.98	299	0.38
107	14.38	33.82	4.14	276	150	11.10	33.84	3.00	25.88	213	0.50
126	12.84	33.91	2.94	240	200	10.66	34.23	1.18	26.26	177	0.60
152	11.09	33.87	3.00	211	250	10.04	34.44	0.79	26.52	152	0.69
179	11.20	34.27	1.47	183	300	9.45	34.43	0.59	26.62	143	0.77
214	10.38	34.21	1.07	174	400	8.18	34.44	0.30	26.83	123	0.90
242	10.14	34.42	0.86	154	500	6.98	34.38	0.24	26.96	111	1.03
286	9.65	34.43	0.63	146	600	(6.11)	(34.44)		(27.11)	(96)	(1.14)
343	8.84	34.46	0.44	132							
433	7.79	34.42	0.24	119							
513	6.82	34.38	0.24	109							
581	6.25	34.42	0.21	99							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; July 16, 1959; 0540 GCT; 25°44'N, 116°24.5'W; sounding, 2000 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 00°. 127.70

2	22.62	34.07	4.78	453	0	(22.62)	(34.07)	(4.78)	(23.36)	(453)	(0.00)	
10	22.66	34.06	4.73	455	10	22.66	34.06	4.73	23.34	455	0.05	
34	19.60	33.93	5.18	385	20	21.00	33.95	4.93	23.71	419	0.09	
42	19.40	33.96	5.22	378	30	19.74	33.93	5.13	24.03	389	0.13	
56	19.16	34.07	5.21	364	50	19.26	34.01	5.23	24.22	371	0.21	
70	18.80	34.13	5.20	351	75	18.60	34.14	5.20	24.48	346	0.30	
91	16.93	33.96	5.11	320	100	16.35	33.96	5.06	24.88	308	0.38	
110	14.57	33.84	4.67	278	150	11.50	33.84	3.19	25.80	220	0.51	
127	12.79	33.77	3.74	249	200	10.44	34.19	1.83	26.26	177	0.61	
155	11.28	33.87	3.04	214	250	10.11	34.38	1.12	26.47	157	0.70	
183	10.64	34.09	2.13	187	300	9.71	34.48	0.71	26.61	144	0.78	
218	10.30	34.28	1.55	167	400	8.25	34.47	0.43	26.84	122	0.91	
245	10.12	-	1.19		500	7.04	34.46	0.35	27.01	106	1.03	
289	9.84	34.47	0.77	146	600	(6.10)	(34.38)		(27.07)	(100)	(1.14)	
347	9.02	34.47	0.51	134								
437	7.72	34.47	0.39	114								
519	6.86	34.45	0.34	104								
585	6.24	34.39	0.40	101								

BLACK DOUGLAS; July 14, 1959; 2305 GCT; 26°29'N, 113°29'W; sounding, 40 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 00°. 130.30

0	19.82	33.84	5.18	398	0	19.82	33.84	5.18	23.94	398	0.00	
9	18.72	33.80	5.58	374	10	18.50	33.80	5.56	24.25	368	0.04	
27	14.04	33.87	3.81	266	20	14.70	33.81	4.52	25.13	284	0.07	
45	13.04	34.00	2.07	237	30	13.92	33.90	3.55	25.38	261	0.10	

BLACK DOUGLAS; July 15, 1959; 0155 GCT; 26°19'N, 113°48.5'W; sounding, 170 fm; wind, 270°, force 3; weather, partly cloudy; sea, slight; wire angle, 30°. 130.35

0	20.48	33.73	4.79	422	0	20.48	33.73	4.79	23.68	422	0.00	
8	20.43	33.73	4.62	421	10	20.10	33.73	4.57	23.78	412	0.04	
24	17.44	33.77	5.23	346	20	17.73	33.76	5.21	24.41	353	0.08	
40	16.20	33.65	5.20	327	30	17.03	33.73	5.23	24.56	339	0.11	
58	15.03	33.86	4.62	287	50	15.61	33.74	4.99	24.88	308	0.18	
76	13.20	33.83	3.44	252	75	13.24	33.83	3.47	25.46	253	0.25	
93	12.19	33.93	2.59	226	100	13.50	34.39	2.12	25.84	217	0.31	
122	13.34	34.61	0.75	197	150	12.43	34.65	0.62	26.25	178	0.41	
151	12.41	34.65	0.61	177	200	(11.73)	(34.70)		(26.42)	(162)	(0.50)	
192	11.84	34.69	0.25	164								

BLACK DOUGLAS; July 15, 1959; 0457 GCT; 26°09'N, 114°07.5'W; sounding, 1150 fm; wind, 270°, force 5; weather, partly cloudy; sea, rough; wire angle, 15°. 130.40

2	23.02	34.05	4.49	466	0	(23.02)	(34.05)	(4.49)	(23.23)	(466)	(0.00)	
10	22.99	34.06	4.73	464	10	22.99	34.06	4.73	23.25	464	0.05	
32	20.56	34.20	4.97	390	20	21.90	34.07	4.90	23.57	433	0.09	
41	19.66	34.16	5.13	370	30	20.72	34.18	4.94	23.97	395	0.13	
54	18.43	34.02	5.11	351	50	18.89	34.09	5.13	24.37	356	0.21	
88	14.32	33.87	3.53	271	75	16.34	33.85	4.51	24.81	315	0.29	
104	12.94	33.95	2.63	238	100	13.19	33.89	2.85	25.52	247	0.36	
121	12.30	34.08	2.08	217	150	11.49	34.27	1.34	26.14	189	0.47	
146	11.54	34.25	1.35	191	200	11.02	34.43	0.82	26.35	168	0.56	
171	11.23	34.31	1.25	181	250	10.31	34.50	0.46	26.53	152	0.65	
204	10.99	34.45	0.78	166	300	9.71	34.51	0.22	26.64	141	0.72	
229	10.61	34.49	0.58	157	400	8.81	34.48	0.15	26.77	128	0.86	
270	10.06	34.51	0.36	147	500	7.45	34.42	0.15	26.92	114	0.99	
324	9.48	34.58u	0.16									
407	8.72	34.48	0.15	128								
484	7.64	34.43	0.15	116								
551	6.83	34.42	0.15	106								

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T_3}^{-5}$	Z	T	S	O_2	σ_t	$\delta_{T_3}^{-5}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

130.50 BLACK DOUGLAS; July 15, 1959; 1045 GCT; 25°49'N, 114°46'W; sounding, 1800+ fm; wind, 300°, force 5; weather, overcast; sea, rough; wire angle, 10°.

1	22.70	34.04	4.78	457	0	(22.70)	(34.04)	(4.78)	(23.32)	(457)	(0.00)
10	22.72	34.05	4.77	457	10	22.72	34.05	4.77	23.32	457	0.05
32	20.60	34.25	5.07	387	20	22.14	34.06	4.79	23.48	442	0.09
41	20.19	34.23	4.99	378	30	20.60	34.17	5.07	23.99	393	0.13
54	17.64	33.89	5.41	342	50	18.41	33.97	5.28	24.40	354	0.21
65	16.16	33.77	4.65	317	75	14.65	33.71	4.08	25.07	290	0.29
88	13.66	33.82	3.55	262	100	13.48	33.96	2.87	25.51	248	0.36
106	13.19	34.04	2.11	237	150	11.21	34.22	1.33	26.16	186	0.47
123	12.27	34.09	1.96	216	200	10.82	34.41	0.80	26.37	167	0.56
149	11.22	34.23	1.35	187	250	10.18	34.46	0.63	26.53	152	0.64
174	11.00	34.21	1.01	184	300	9.41	34.41	0.52	26.61	144	0.72
208	10.72	34.45	0.75	162	400	8.33	34.45	0.18	26.82	124	0.85
234	10.32	34.46	0.70	154	500	7.26	34.42	0.22	26.95	112	0.98
276	9.87	34.45	0.52	148							
332	8.84	34.38	0.52	137							
418	8.20	34.47	0.15	121							
498	7.29	34.42	0.22	112							
564	6.64	34.39	0.19	106							

130.60 BLACK DOUGLAS; July 15, 1959; 1607, 1800 GCT; 25°28'N, 115°27'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 20°, 30°.

1	22.44	33.99	4.82	454	0	(22.44)	(33.99)	(4.82)	(23.34)	(454)	(0.00)
10	22.40	-	4.78		10	22.40	(33.99)	4.78	(23.36)	(453)	(0.04)
32	19.28	33.86	5.19	382	20	20.45	(33.90)	5.03	(23.82)	(409)	(0.09)
40	18.74	33.84	5.27	371	30	19.42	(33.86)	5.17	(24.06)	(386)	(0.13)
52	18.10	33.83	5.35	357	50	18.20	33.83	5.34	24.35	359	0.20
66	17.76	33.89	5.34	344	75	17.18	33.87	5.27	24.62	333	0.29
85	15.78	33.78	5.07	308	100	14.50	33.76	4.36	25.14	283	0.37
101	14.46	33.76	4.34	282	150	11.14	33.98	2.42	25.97	204	0.49
117	12.24	33.75	3.76	240	200	11.05	34.44	0.86	26.35	168	0.58
141	11.14	33.86	2.82	213	250	10.36	34.50	0.58	26.52	152	0.66
165	11.14	34.16	1.75	191	300	9.73	34.48	0.42	26.62	143	0.74
195	11.11	34.42	0.91	171	400	8.26	34.43	0.27	26.81	125	0.88
220	10.69	34.48	0.73	160	500	7.18	34.43	0.20	26.96	110	1.01
259	10.26	34.51	0.52	150	600	6.18	34.40	0.21	27.08	99	1.12
313	9.48	-	0.41		700	5.49	34.41	0.23	27.17	91	1.22
395	8.27	34.44	0.27	124	800	4.94	34.43	0.26	27.25	83	1.32
473	7.48	34.43	0.23	114	1000	4.27	34.51	0.40	27.40	69	1.49
539	6.86	34.43	0.21	106	1200	3.69	34.55	0.57	27.48	61	1.64
					1500	3.00	34.56	1.02	27.56	54	1.84
304a)	9.74	34.49	0.38	143	2000	2.19	34.61	1.72	27.67	44	2.14
379	8.66	34.44	0.29	130	2500	1.82	34.64	2.24			
455	7.60	34.43	0.23	116							
532	6.84	34.42	0.17	106							
611	6.08	34.40	0.22	98							
770	5.10	34.42	0.25	85							
931	4.52	34.49b)	0.36	74							
1096	3.96	34.54	0.49	64							
1263	3.54	34.56	0.66	59							
1433	3.14	34.56b)	0.93	55							
1603	2.83	34.57	1.15	52							
1775	2.48	34.60b)	1.41	47							
1948	2.26	34.61b)	1.68	44							
2121	2.08	34.62b)	1.94	42							
2295	1.94	34.65	2.13	38							
2473	1.84	34.65b)	2.23	38							
2562	1.82	34.63b)	2.30	38							
2654	1.77	-	-								

a) Overlapping casts; reconciliation of property curves when necessary.

b) Salinity bottle numbers at these levels appear to have been listed out of order on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; July 16, 1959; 0035 GCT; 25°08.5'N, 116°02'W; sounding, 2000 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 08°. 130.70

1	22.61	33.87	4.73	467	0	(22.61)	(33.87)	(4.73)	(23.21)	(467)	(0.00)
10	22.56	33.86	4.77	467	10	22.56	33.86	4.77	23.21	467	0.05
32	19.98	34.04	5.04	386	20	21.30	33.84	4.91	23.55	435	0.09
41	19.58	33.99	5.11	380	30	20.04	34.04	5.01	24.04	388	0.13
54	19.20	34.00	5.20	370	50	19.24	33.97	5.20	24.19	374	0.21
68	18.73	34.00	5.11	359	75	18.05	33.92	5.14	24.46	348	0.30
90	16.59	33.76	5.24	327	100	15.70	33.76	5.08	24.88	308	0.38
108	14.79	33.77	4.71	288	150	11.52	33.80	3.12	25.76	224	0.51
126	12.96	33.86	3.31	245	200	10.53	34.19	1.64	26.24	178	0.62
152	11.42	33.80	3.08	222	250	10.13	34.42	0.94	26.49	155	0.70
179	10.87	34.07	2.08	193	300	9.67	34.46	0.58	26.61	144	0.78
214	10.38	34.27	1.38	169	400	8.21	34.49	0.39	26.86	120	0.92
242	10.20	34.40	1.04	157	500	7.18	34.42	0.18	26.96	111	1.04
286	9.86	34.45	0.61	148							
343	9.04	34.49	0.51	133							
432	7.76	34.46	0.30	115							
513	7.09	34.42	0.17	110							
579	6.38	34.42	0.27	100							

BLACK DOUGLAS; July 14, 1959; 1750 GCT; 26°04.5'N, 112°48'W; sounding, 40 fm; wind, 330°, force 2; weather, partly cloudy; sea, slight; wire angle, 03°. 133.25

1	21.02	33.99	5.55	417	0	(21.02)	(33.99)	(5.55)	(23.74)	(417)	(0.00)
9	17.48	33.88	4.90	338	10	17.40	33.88	4.87	24.58	337	0.04
28	14.08	33.88	2.97	266	20	15.00	33.83	3.74	25.09	288	0.07
45	13.32	34.20	1.04	227	30	14.03	33.90	2.89	25.34	264	0.10

BLACK DOUGLAS; July 14, 1959; 1458 GCT; 25°54.5'N, 113°07.5'W; sounding, 110 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 05°. 133.30

1	22.45	-	4.90		0	(22.45)	(34.00)	(4.90)	(23.35)	(454)	(0.00)
9	22.46	34.00	4.93	454	10	22.45	34.00	4.93	23.35	454	0.04
28	15.60	33.73	5.17	308	20	18.00	33.78	5.16	24.36	358	0.09
45	13.24	33.93	2.83	246	30	15.39	33.72	5.04	24.93	304	0.12
68	13.00	34.27	1.70	216	50	13.14	33.97	2.67	25.59	241	0.17
90	13.02	34.55	0.89	196	75	13.41	34.50	1.36	25.94	207	0.23
112	12.78	34.59	0.43	188	100	12.89	34.57	0.63	26.10	192	0.28
140	12.64	34.62	0.71	184	150	(12.62)	(34.63)		(26.20)	(183)	(0.38)

BLACK DOUGLAS; July 14, 1959; 0342 GCT; 25°34.5'N, 113°45.5'W; sounding, 1500 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 17°. 133.40

1	21.63	33.77	4.96	449	0	(21.63)	(33.77)	(4.96)	(23.40)	(449)	(0.00)
9	20.76	33.77	5.10	426	10	20.65	33.77	5.08	23.67	423	0.04
27	18.69	33.72	4.46	378	20	19.15	33.68	4.59	24.00	392	0.08
35	18.38	33.89	4.50	359	30	18.57	33.80	4.46	24.23	370	0.12
49	17.11	33.77	4.58	338	50	17.06	33.77	4.60	24.58	337	0.19
62	16.38	33.87	4.95	314	75	15.22	33.94	3.90	25.08	289	0.27
85	14.40	33.89	2.73	271	100	13.48	34.13	1.04	25.65	235	0.34
102	13.48	34.18	0.96	232	150	12.76	34.63	0.45	26.18	185	0.44
119	13.80	34.60	0.55	207	200	12.21	34.78	0.17	26.40	164	0.53
137	12.75	34.52	0.62	193	250	11.44	34.70	0.15	26.48	156	0.61
164	12.76	34.74	0.30	177	300	10.82	34.70	0.12	26.59	146	0.69
194	12.31	34.79	0.17	165	400	9.04	34.58	0.16	26.81	125	0.83
220	11.91	34.74	0.16	161	500	7.50	34.47	0.20	26.96	111	0.96
264	11.23	34.69	0.14	153							
313	10.66	-	0.11								
388	9.24	34.60	0.14	127							
464	8.00	34.49	0.19	117							
541	6.94	34.45	0.22	105							

SIO

CCOFI
5907

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T,S}^{-5}$ 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T,S}^{-5}$ 10^3 cm/g	ΔD dyn. m

133.50 BLACK DOUGLAS; July 13, 1959; 2115, 2145 GCT; 25°14.5'N, 114°24'W; sounding, 1870 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 05°, 03°.

1	22.94	33.93	4.84	471	0	(22.94)	(33.93)	(4.84)	(23.17)	(471)	(0.00)
10	22.48	-	4.83		10	22.48	33.90	4.83	23.27	461	0.05
28	17.66	33.80	5.01	349	20	19.90	33.81	4.97	23.90	402	0.09
37	15.80	33.84	5.02	304	30	17.40	33.82	5.03	24.54	341	0.13
51	13.90	33.75	3.79	272	50	13.94	33.75	3.80	25.25	273	0.19
64	12.62	33.78	3.54	245	75	11.94	33.78	3.42	25.67	233	0.25
86	11.36	33.78	3.26	222	100	10.92	33.89	2.80	25.94	207	0.31
104	10.88	33.93	2.62	203	150	10.90	34.27	0.97	26.24	178	0.40
122	11.20	34.18	1.57	190	200	10.80	34.55	0.39	26.48	156	0.49
139	10.96	34.18	1.09	186	250	10.01	34.55	0.29	26.62	143	0.57
164	10.84	34.43	0.84	166	300	9.38	34.53	0.23	26.71	134	0.64
195	10.88	34.55	0.38	158	400	8.12	34.47	0.19	26.86	120	0.77
222	10.40	34.52	0.41	151	500	7.10	34.46	0.20	27.00	107	0.89
269	9.76	34.55	0.22	139							
317	9.16	34.51	0.23	132							
394	8.18	34.47	0.20	121							
470	7.46	34.46	0.13	112							
546	6.58	34.47	0.38	99							

133.60 BLACK DOUGLAS; July 13, 1959; 1439 GCT; 24°53'N, 115°01'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 09°.

1	22.82	33.98	4.86	465	0	(22.82)	(33.98)	(4.86)	(23.23)	(465)	(0.00)
10	22.82	34.01	4.84	463	10	22.82	34.01	4.84	23.25	463	0.05
28	18.60	33.89	5.42	364	20	21.25	33.97	5.13	23.66	425	0.09
36	16.65	33.80	5.53	326	30	18.29	33.88	5.44	24.36	357	0.13
50	14.67	33.71	5.20	290	50	14.67	33.71	5.20	25.07	290	0.19
62	13.60	33.78	4.23	263	75	12.99	33.87	3.43	25.55	245	0.26
85	12.54	33.92	2.91	233	100	11.83	33.97	2.40	25.84	217	0.32
102	11.82	34.00	2.32	214	150	11.04	34.40	1.00	26.32	171	0.42
119	11.86	34.31	1.22	192	200	10.44	34.49	0.70	26.49	155	0.50
136	11.46	34.42	0.90	177	250	10.37	34.62	0.25	26.62	143	0.58
162	10.76	34.39	1.05	167	300	9.47	34.49	0.40	26.66	139	0.65
193	10.41	34.45	0.79	157	400	7.97	34.45	0.31	26.88	118	0.78
218	10.60	34.59	0.45	150	500	6.88	34.48	0.20	27.05	102	0.90
262	10.20	34.61	0.23	141							
310	9.29	34.47	0.43	137							
385	8.14	34.45	0.33	122							
462	7.24	34.47	0.23	108							
538	6.57	34.50	0.19	96							

133.70 BLACK DOUGLAS; July 13, 1959; 0912 GCT; 24°34.5'N, 115°39'W; sounding, 2100 fm; wind, 280°, force 3; weather, clear; sea, moderate; wire angle, 10°.

1	21.88	33.78	4.96	455	0	(21.88)	(33.78)	(4.96)	(23.34)	(455)	(0.00)
10	21.91	33.77	4.90	456	10	21.79	33.77	4.90	23.33	456	0.05
29	20.00	34.02	5.03	389	20	21.40	33.81	4.90	23.50	439	0.09
37	19.60	33.97	5.12	382	30	19.90	34.00	5.05	24.04	388	0.13
51	19.51	34.04	5.12	375	50	19.52	34.04	5.12	24.18	375	0.21
64	19.20	34.02	5.16	369	75	18.57	33.97	5.20	24.36	357	0.30
86	17.57	33.91	5.23	338	100	16.10	33.82	5.11	24.85	311	0.38
104	15.43	33.75	5.00	303	150	11.77	34.03	2.04	25.90	211	0.52
121	13.14	33.76	3.58	256	200	11.12	34.47	0.73	26.36	167	0.61
138	12.14	33.94	2.33	224	250	10.43	34.50	0.60	26.51	153	0.69
164	11.48	34.16	1.75	197	300	9.64	34.50	0.52	26.64	141	0.77
193	11.24	34.45	0.77	171	400	8.19	34.45	0.40	26.84	122	0.91
219	10.76	34.49	0.66	160	500	7.10	34.46	0.20	27.00	107	1.03
263	10.28	34.51	0.54	150							
310	9.46	34.60u	0.50								
385	8.36	34.45	0.42	124							
460	7.54	34.46	0.23	112							
536	6.70	34.45	0.16	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; July 11, 1959; 1147 GCT; 25°34'N, 112°18.5'W; sounding, 40 fm; wind, direction missing, force 1; weather, clear; sea, calm; wire angle, 00°. 137.23

0	23.08	34.04	4.47	468	0	23.08	34.04	4.47	23.20	468	0.00
9	22.80	34.04	4.77	460	10	22.70	34.04	4.77	23.30	458	0.05
27	16.36	33.93	4.63	310	20	19.25	33.98	4.73	24.20	373	0.09
45	14.02	-	1.67		30	14.95		4.40			

BLACK DOUGLAS; July 11, 1959; 1504 GCT; 25°20'N, 112°45.5'W; sounding, 190 fm; wind, 270°, force 2; weather, fog; sea, slight; wire angle, 00°. 137.30

0	22.44	33.93	4.65	459	0	22.44	33.93	4.65	23.30	459	0.00
9	21.28	33.86	4.84	433	10	21.12	33.86	4.84	23.61	429	0.04
27	15.48	33.78	4.39	302	20	18.22	33.84	4.62	24.35	359	0.08
44	13.48	33.78	3.29	261	30	14.75	33.76	4.22	25.09	288	0.12
67	13.24	34.04	1.65	238	50	13.34	33.82	2.92	25.44	255	0.17
90	12.80	34.19	1.30	218	75	13.25	34.13	1.50	25.69	231	0.23
112	12.50	34.51	0.39	189	100	12.65	34.36	0.85	25.98	203	0.29
148	12.24	34.61	0.16	177	150	12.22	34.61	0.15	26.26	176	0.38
184	11.90	34.66	0.12	167	200	11.69	34.66	0.08	26.41	163	0.47
229	11.34	34.64	0.07	159	250	11.18	34.61	0.08	26.47	157	0.55
273	11.04	34.60	0.09	156							

BLACK DOUGLAS; July 11, 1959; 2228 GCT; 25°10'N, 113°04.5'W; sounding, 700 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 11°. 137.35

1	23.26	33.89	4.95	484	0	(23.26)	(33.89)	(4.95)	(23.04)	(484)	(0.00)
10	21.94	33.91	5.04	446	10	21.94	33.91	5.04	23.43	446	0.05
27	17.36	33.84	5.49	338	20	18.70	33.80	5.47	24.20	373	0.09
36	16.36	34.05	3.99	301	30	16.94	33.88	5.21	24.69	326	0.12
49	15.36	34.15	2.53	272	50	15.30	34.16	2.52	25.28	270	0.18
62	14.18	34.20	1.81	244	75	14.23	34.38	1.14	25.68	232	0.24
84	14.50	34.58	0.78	223	100	13.98	34.66	0.52	25.94	207	0.30
102	13.88	34.67	0.46	204	150	12.80	34.77	0.24	26.28	176	0.40
120	13.30	34.77	0.30	185	200	12.07	34.72	0.25	26.38	166	0.48
137	12.96	34.74	0.28	181	250	11.82	34.70	0.18	26.42	162	0.57
164	12.62	34.78	0.23	172	300	11.29	34.66	0.19	26.48	156	0.65
195	12.11	34.72	0.28	167	400	9.83	34.58	0.13	26.67	138	0.80
220	11.98	34.71	0.18	164	500	7.84	34.46	0.11	26.90	117	0.93
265	11.71	34.70	0.19	161							
313	11.12	34.65	0.19	154							
388	10.10	34.60	0.14	141							
463	8.28	34.46	0.10	123							
538	7.47	34.45	0.14	112							

BLACK DOUGLAS; July 12, 1959; 0157 GCT; 25°00'N, 113°23.5'W; sounding, 1300 fm; wind, 300°, force 3; weather, partly cloudy; sea, slight; wire angle, 11°. 137.40

0	23.25	-	5.21		0	23.25	(33.94)	5.21	(23.07)	(480)	(0.00)
9	21.72	33.94	5.39	438	10	21.70	33.94	5.39	23.52	438	0.05
31	15.72	33.79	5.26	306	20	17.88	33.91	5.36	24.50	345	0.08
40	14.82	33.82	4.12	285	30	15.82	33.79	5.32	24.88	308	0.12
53	13.70	33.96	2.83	252	50	14.05	33.94	3.20	25.38	260	0.17
67	14.84	34.63	1.05	226	75	14.68	34.69	0.76	25.82	218	0.23
89	13.90	34.65	0.51	206	100	13.62	34.73	0.41	26.08	194	0.29
107	13.50	34.77	0.31	189	150	12.59	34.76	0.21	26.31	172	0.38
125	13.14	34.76	0.15	183	200	11.73	34.73	0.14	26.45	159	0.46
152	12.54	34.76	0.21	171	250	11.11	34.68	0.22	26.53	151	0.54
179	12.02	34.74	0.18	164	300	10.40	34.61	0.16	26.60	145	0.62
214	11.56	34.72	0.13	157	400	9.10	34.52	0.17	26.74	131	0.76
240	11.26	34.70	0.22	153	500	7.77	34.49	0.20	26.93	114	0.89
285	10.62	34.63	0.16	147	600	(7.68)	(34.43)		(27.03)	(104)	(1.00)
343	9.82	34.55	0.16	140							
433	8.70	34.51	0.17	126							
513	7.60	34.49	0.20	112							
581	6.86	34.44	0.15	105							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
137.50	BLACK DOUGLAS; July 12, 1959; 0750 GCT; 24°41'N, 113°57.5'W; sounding, 1900 fm; wind, 270°, force 3; weather, clear; sea, moderate; wire angle, 16°.										
1	22.87a)	34.02	4.94	463	0	(22.87)	(34.02)	(4.94)	(23.26)	(463)	(0.00)
10	22.37	34.08	4.80	445	10	22.37	34.08	4.80	23.44	445	0.05
28	19.94	33.94	5.15	393	20	20.42	33.94	5.11	23.86	405	0.09
36	19.92	34.09	5.11	381	30	19.93	33.95	5.14	24.01	391	0.13
50	18.84	33.99	5.22	363	50	18.84	33.99	5.22	24.30	363	0.20
62	18.14	33.95	5.23	349	75	16.99	33.87	5.14	24.67	328	0.29
83	15.68	33.83	4.84	302	100	14.47	33.74	4.43	25.14	284	0.37
99	14.57	33.75	4.46	285	150	11.81	34.19	1.56	26.02	200	0.49
116	12.88	33.78	3.52	250	200	11.59	34.60	0.39	26.37	167	0.58
132	12.46	34.09	2.19	220	250	10.49	34.54	0.41	26.52	151	0.66
156	11.74	34.25	1.35	194	300	9.78	34.55	0.25	26.66	139	0.74
183	11.82	34.51	0.55	177	400	8.41	34.51	0.27	26.85	121	0.87
205	11.48	34.61	0.36	164	500	7.04	34.44	0.23	26.99	108	0.99
244	10.60	34.54	0.42	154							
289	9.94	34.56	0.24	141							
358	8.92	34.52	0.26	128							
431	8.01	34.48	0.27	118							
507	6.97	34.43	0.22	107							
137.60	BLACK DOUGLAS; July 12, 1959; 1302 GCT; 24°23'N, 114°29'W; sounding, 2000 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 07°.										
1	22.45	33.94	4.83	458	0	(22.45)	(33.94)	(4.83)	(23.31)	(458)	(0.00)
10	21.76	33.95	4.90	439	10	21.76	33.95	4.90	23.51	439	0.04
28	19.40	33.99	5.14	376	20	20.72	34.02	4.96	23.84	407	0.09
36	18.60	33.80	5.27	370	30	19.05	33.92	5.25	24.21	372	0.13
50	18.38	33.76	5.26	368	50	18.38	33.76	5.26	24.25	368	0.20
64	18.46	33.91	5.02	359	75	17.32	33.89	4.94	24.61	334	0.29
86	15.77	33.82	4.90	305	100	13.78	33.80	4.00	25.34	265	0.36
103	13.31	33.80	3.75	256	150	11.31	33.98	2.45	25.95	206	0.48
121	12.23	33.93	2.87	227	200	11.39	34.46	0.66	26.30	173	0.58
139	11.40	33.89	2.74	215	250	10.71	34.63	0.30	26.56	149	0.66
166	11.28	34.17	1.76	192	300	9.52	34.52	0.37	26.68	137	0.73
196	11.40	34.43	0.76	175	400	8.19	34.46	0.25	26.85	121	0.87
222	11.27	34.61	0.32	160	500	7.12	34.45	0.12	26.99	108	0.99
265	10.32	34.59	0.30	145							
314	9.29	34.51	0.38	134							
389	8.30	34.47	0.27	122							
464	7.52	34.45	0.17	113							
539	6.70	34.46	0.10	101							

a) Alternate value, 22.64°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm³/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm³/g	ΔD dyn. m

BLACK DOUGLAS; July 12, 1959; 1938 GCT; 24°00'N, 115°17.5'W; sounding, 2000+ fm; wind, 290°, force 3; weather, partly cloudy; sea, moderate; wire angle, 07°. 137.70

1	23.30	-	4.81		0	(23.30)	(34.02)	(4.81)	(23.12)	(476)	(0.00)
10	22.40	34.02	4.87	451	10	22.40	34.02	4.87	23.38	451	0.05
28	20.82	34.23	5.05	394	20	21.34	34.18	5.04	23.80	411	0.09
36	20.38	34.17	4.98	387	30	20.69	34.21	5.04	23.99	393	0.13
50	19.80	34.13	5.14	376	50	19.80	34.13	5.14	24.17	376	0.21
64	18.73	34.04	5.27	356	75	17.93	33.98	5.27	24.53	342	0.30
86	17.07	33.89	5.21	328	100	15.35	33.74	4.69	24.95	302	0.38
103	14.64	33.74	4.35	288	150	11.76	33.95	2.77	25.84	217	0.51
121	13.16	33.75	3.79	257	200	10.10	34.09	2.17	26.24	178	0.61
139	12.36	33.95	2.85	228	250	9.89	34.33	1.15	26.47	157	0.70
166	10.98	33.95	2.65	203	300	9.42	34.42	0.63	26.62	143	0.77
197	10.11	34.07	2.23	180	400	8.27	34.41	0.36	26.80	126	0.91
223	10.19	34.30	1.43	164	500	6.99	34.39	0.26	27.07	110	1.04
267	9.70	34.34	1.00	154							
317	9.28	34.46	0.51	138							
393	8.38	34.42	0.37	127							
470	7.27	34.38	0.27	115							
544	6.61	34.42	0.24	104							

BLACK DOUGLAS; July 13, 1959; 0120 GCT; 23°35'N, 115°59.5'W; sounding, 2000 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°. 137.80

0	23.78	34.42	4.73	460	0	23.78	34.42	4.73	23.29	460	0.00
9	23.66	34.25u	4.83		10	23.63	34.42	4.84	23.32	456	0.05
31	21.45	34.42	4.95	397	20	22.30	34.42	4.94	23.71	419	0.09
40	20.90	34.39	4.96	385	30	21.50	34.42	4.95	23.93	399	0.13
53	19.74	34.24	5.20	366	50	19.89	34.25	5.16	24.24	369	0.21
67	19.20	34.22	5.23	354	75	18.80	34.21	5.23	24.49	345	0.30
89	17.83	-	5.13		100	16.61	34.00	4.87	24.86	310	0.38
107	15.76	33.91	4.57	298	150	12.11	34.00	2.47	25.81	219	0.52
125	13.78	33.81	3.81	265	200	10.71	34.32	1.45	26.32	171	0.61
152	11.98	33.99	2.44	218	250	10.30	34.46	0.80	26.50	154	0.70
178	10.72	34.11	2.10	187	300	9.78	34.52	0.49	26.64	141	0.78
214	10.68	34.42	1.10	164	400	8.50	34.50	0.37	26.83	123	0.91
241	10.38	34.44	0.87	156	500	7.44	34.46	0.21	26.95	112	1.04
285	9.98	34.52	0.52	144							
343	9.22	34.52	0.41	133							
432	8.15	34.50	0.30	118							
512	7.33	34.45	0.19	110							
579	6.68	34.49	0.20	99							

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
60.52-O	VII-24	0522	37°53.0'	122°58.5'	40	330°	4	clear	rough	13.86	33.68
60.65-O	24	1416	37°25.0'	123°58.5'	2000+	320°	5	cloudy	high	14.74	33.58
60.75-O	24	2039	37°02.0'	124°45.0'	1800+	320°	5	overcast	high	15.99	32.90
60.85-O	25	0220	36°45.0'	125°18.5'	2000+	320°	5	cloudy	high	16.80	32.92
63.55-O	22	1357	37°10.0'	122°47.0'	147	310°	3	overcast	rough	15.24	33.48
63.65-O	22	0804	36°51.0'	123°31.0'	1200+	300°	2	overcast	moderate	13.94	33.60
63.75-O	22	0250	36°30.5'	124°09.5'	2000+	300°	2	overcast	rough	16.55	32.92
63.85-O	21	2141	36°09.0'	124°48.5'	2000+	300°	3	cloudy	very rough	16.33	32.96
67.50-O	20	1330	36°50.5'	122°07.0'	40+	300°	1	fog	moderate	13.44	33.68
67.75-O	21	0447	36°01.5'	123°52.0'	2000+	300°	1	overcast	rough	16.49	32.90
67.85-O	21	1030	35°36.5'	124°30.0'	2000+	300°	2	overcast	rough	15.16	32.88
70.55-O	20	0515	36°02.5'	122°02.5'	700	310°	3	overcast	moderate	14.83	33.69
70.65-O	19	2240	35°41.0'	122°42.5'	2000+	310°	4	overcast	moderate	14.42	33.51
70.75-O	19	1650	35°20.0'	123°24.5'	2000+	310°	3	overcast	rough	15.28	33.14
70.85-O	19	1030	34°59.5'	124°07.5'	2200+	300°	2	overcast	rough	14.82	33.19
73.51-O	17	1815	35°34.5'	121°21.5'	200	310°	3	overcast	moderate	14.14	33.69
73.65-O	18	0230	35°06.0'	122°18.5'	2000+	310°	3	overcast	very rough	15.25	33.69
73.75-O	18	0839	34°43.0'	123°01.0'	2200+	310°	2	overcast	rough	14.88	33.28
73.85-O	18	1450	34°20.0'	123°45.0'	2000+	300°	2	overcast	moderate	16.56	33.12

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
77.50-O	VII-17	1317	35°05.0'	120°52.5'	70	310°	3	drizzle	moderate	15.46	33.68
77.65-O	17	0315	34°31.5'	121°54.5'	2200+	310°	3	overcast	rough	16.08	33.69
77.75-O	16	2100	34°12.0'	122°36.0'	2300	310°	2	overcast	rough	15.22	33.28
77.85-O	16	1508	33°50.0'	123°17.5'	2000+	310°	2	overcast	rough	16.40	33.51
80.65-O	12	1425	33°58.5'	121°32.0'	1500	310°	4	partly cloudy	rough	15.20	33.71
80.75-O	15	1840	33°37.5'	122°11.0'	2000	310°	1	overcast	rough	14.76	33.37
80.80-O	15	2120	33°29.0'	122°32.5'	2000	300°	1	overcast	rough	16.61	33.45
80.85-O	16	0000	33°19.0'	122°54.0'	2000	300°	2	cloudy	rough	16.64	33.53
83.65-P	12	0942	33°24.0'	121°05.5'	1930	270°	4	missing	rough	15.64	33.61
83.75-P	12	1620	33°03.5'	121°46.0'	2100	320°	4	partly cloudy	rough	16.45	33.46
83.85-P	12	2245	32°44.0'	122°26.0'	2200	320°	5	clear	very rough	17.21	33.54
87.50-P	14	1555	33°20.0'	119°39.5'	40	320°	4	overcast	very rough	15.59	33.68
87.65-P	14	0400	32°46.5'	120°40.0'	2050	320°	6	overcast	high	16.24	33.55
87.75-P	13	1948	32°28.0'	121°22.5'	2300	330°	5	overcast	high	16.52	33.44
87.85-P	13	1215	32°09.0'	122°02.5'	2200	320°	7	cloudy	very rough	17.00	33.48
90.65-P	23	1425	32°16.0'	120°18.5'	2150	320°	5	overcast	very rough	17.16	33.57
90.75-P	23	0759	31°57.0'	121°00.0'	2050	320°	4	overcast	rough	17.68	33.59
90.85-P	23	0142	31°37.5'	121°41.5'	2200	330°	4	overcast	moderate	17.60	33.57
93.35-P	21	0205	32°40.0'	117°52.0'	325	220°	3	overcast	moderate	19.92	33.71

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
93.45-P	VII-21	0838	32°20.5'	118°33.0'	890	270°	2	overcast	moderate	19.63	33.80
93.55-P	21	1620	32°03.0'	119°15.0'	800	340°	3	overcast	moderate	18.67	33.84
93.65-P	21	2240	31°43.5'	119°56.0'	2030	290°	2	cloudy	moderate	17.13	33.55
93.75-P	22	0438	31°22.0'	120°36.0'	2000	290°	3	overcast	moderate	17.64	33.40
93.85-P	22	1040	31°01.5'	121°15.5'	2140	290°	3	overcast	moderate	17.26	33.42
97.35-P	20	1045	32°03.0'	117°29.0'	700	-	1	overcast	moderate	18.82	-
97.45-P	20	0345	31°39.0'	118°10.0'	820	320°	4	overcast	very rough	20.60	-
97.55-P	19	2005	31°12.0'	118°51.0'	800	320°	4	overcast	rough	17.96	33.63
97.65-P	19	1505	30°56.0'	119°24.5'	1930	340°	4	cloudy	rough	17.58	33.61
97.75-P	19	0820	30°40.0'	120°08.0'	1970	320°	4	cloudy	moderate	17.54	33.51
97.85-P	19	0223	30°23.0'	120°50.5'	2000	320°	4	cloudy	rough	17.98	33.55
100.29-P	17	0020	31°42.0'	116°43.5'	78	290°	4	cloudy	slight	13.55	33.57
100.35-P	17	0445	31°31.0'	117°07.0'	650	300°	4	cloudy	moderate	20.04	33.71
100.45-P	17	1135	31°06.0'	117°50.0'	1000	270°	3	overcast	moderate	20.32	33.77
100.55-P	17	1745	30°46.0'	118°29.0'	1100	300°	3	overcast	moderate	18.50	33.68
100.65-P	17	2330	30°28.0'	119°06.5'	1700	320°	3	overcast	moderate	18.16	33.60
100.75-P	18	0520	30°07.5'	119°44.0'	2000	290°	2	overcast	moderate	18.17	33.60
100.85-P	18	1120	29°45.5'	120°22.0'	2050	290°	3	overcast	moderate	17.78	33.54
103.45-B	VIII-1	0750	30°39.0'	117°26.5'	1100	270°	4	clear	moderate	21.12	33.78

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
103.55-B	VIII-1	0235	30°20.0'	118°04.0'	1050	340°	4	partly cloudy	moderate	19.31	33.58
103.65-B	VII-31	2030	29°54.0'	118°46.0'	1850	340°	5	cloudy	moderate	19.01	33.58
103.75-B	31	1510	29°37.0'	119°24.5'	1300	340°	4	cloudy	moderate	18.70	33.57
107.55-B	27	1400	29°40.5'	117°43.0'	1600	320°	2	overcast	moderate	20.30	33.98
107.65-B	27	0820	29°21.0'	118°23.0'	1750	280°	3	cloudy	moderate	20.72	33.97
107.75-B	27	0240	29°01.5'	119°03.5'	1800	320°	3	overcast	moderate	21.20	34.14
107.85-B	26	2105	28°41.0'	119°42.0'	1850	320°	3	overcast	moderate	19.20	33.62
110.45-B	25	0500	29°27.0'	116°39.0'	560	270°	2	missing	moderate	20.60	33.78
110.55-B	25	1000	29°09.0'	117°18.5'	1900	270°	3	overcast	moderate	19.04	33.65
110.65-B	25	1535	28°46.0'	117°58.0'	1840	320°	1	overcast	moderate	19.55	33.68
110.75-B	26	0325	28°26.0'	118°38.0'	2050	300°	2	cloudy	moderate	20.68	33.90
110.85-B	26	0830	28°09.0'	119°16.0'	2100	270°	3	partly cloudy	moderate	21.50	33.97
113.45-B	24	0345	28°52.0'	116°18.0'	1080	320°	4	overcast	moderate	20.48	33.71
113.55-B	23	2215	28°32.0'	116°57.0'	1800	320°	4	cloudy	moderate	20.37	33.78
113.65-B	23	1655	28°18.0'	117°35.5'	1860	320°	3	overcast	moderate	20.58	33.82
113.75-B	23	1100	27°55.0'	118°16.0'	2000	340°	4	cloudy	moderate	21.74	34.25
113.85-B	23	0522	27°33.0'	118°55.0'	2000	320°	4	cloudy	moderate	21.66	34.03
117.45-B	21	2250	28°18.0'	115°55.0'	1700	320°	2	cloudy	moderate	20.62	33.75
117.55-B	22	0400	27°57.5'	116°34.5'	1750	270°	3	overcast	moderate	21.28	33.92

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
117.65-B	VII-22	0900	27°37.5'	117°13.0'	2000	270°	4	partly cloudy	moderate	21.34	33.81
117.75-B	22	1405	27°17.0'	117°53.0'	2000	320°	3	cloudy	moderate	21.54	33.86
117.85-B	22	1845	26°59.0'	118°30.0'	2000	320°	3	cloudy	moderate	22.55	34.31
120.40-B	20	0420	27°56.5'	115°14.0'	20	300°	5	partly cloudy	moderate	17.46	33.65
120.55-B	19	1855	27°23.0'	116°12.0'	2000	360°	3	cloudy	moderate	20.38	-
120.65-B	19	1230	27°00.5'	116°56.0'	2000	340°	3	overcast	moderate	20.82	33.72
120.75-B	19	0630	26°41.5'	117°31.5'	2100	320°	3	cloudy	rough	21.58	33.73
120.85-B	19	0045	26°22.5'	118°08.0'	2150	340°	4	cloudy	moderate	22.34a)	34.32
123.45-B	17	2020	27°08.0'	115°11.0'	2250	320°	4	partly cloudy	moderate	21.60	33.75
123.55-B	18	0110	26°54.0'	115°49.0'	2000	330°	3	partly cloudy	moderate	21.92	33.82
123.65-B	18	0705	26°29.0'	116°28.0'	2000	320°	4	cloudy	moderate	21.82	33.78
127.45-B	16	1940	26°35.5'	114°48.5'	1750	320°	3	partly cloudy	moderate	21.32	33.78
127.55-B	16	1405	26°15.0'	115°27.0'	2000	340°	3	cloudy	moderate	22.16	33.91
127.65-B	16	0810	25°54.5'	116°05.5'	2000	340°	4	cloudy	moderate	22.64	34.02
130.45-B	15	0753	25°59.0'	114°26.0'	1860	270°	5	partly cloudy	rough	22.82	34.08
130.55-B	15	1315	25°40.0'	115°03.0'	2000	320°	4	cloudy	rough	23.12	34.11

a) Mean value of 22.28 and 22.40°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
130.65-B	VII-15	2146	25°19.0'	115°42.0'	2000	330°	4	cloudy	moderate	22.38a)	33.96
133.35-B	14	0820	25°44.5'	113°26.5'	380	320°	2	partly cloudy	slight	19.84	33.75
133.45-B	14	0025	25°28.0'	114°05.0'	1800	330°	4	clear	moderate	22.93	33.83
133.55-B	13	1750	25°02.0'	114°41.0'	2000+	340°	3	cloudy	moderate	22.88	33.93
133.65-B	13	1155	24°44.0'	115°19.0'	2000	320°	4	cloudy	moderate	21.56	33.93
134.36-B	14	0720	25°38.0'	113°25.0'	-	-	-	missing	missing	19.44	33.72
137.45-B	12	0430	24°50.0'	113°42.5'	1900	270°	3	clear	slight	20.83	33.96
137.55-B	12	1025	24°32.5'	114°13.5'	2100	300°	3	clear	moderate	22.72	34.07
137.65-B	12	1650	24°10.0'	114°58.5'	2000	290°	3	cloudy	moderate	22.38	33.96
137.75-B	12	2230	23°48.0'	115°37.0'	2100	320°	3	partly cloudy	moderate	23.42	34.37

a) Mean value of 22.31 amd 22.44°C.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
77.55	ORCA; August 15, 1959; 0830 GCT; 34°52'N, 121°17'W; sounding, 240 fm; wind, 290°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.										
1	16.94	33.57	5.60	349	0	(16.94)	(33.57)	(5.60)	(24.45)	(349)	(0.00)
11	16.49	33.60	5.77	337	10	16.50	33.60	5.77	24.58	337	0.03
40	12.06	33.43	4.97	260	20	15.80	33.57	5.76	24.72	324	0.07
65	10.92	33.56	4.20	231	30	15.00	33.54	5.68	24.87	309	0.10
95	9.90	33.64	3.48	208	50	11.64	33.52	4.67	25.52	247	0.15
130	9.24	33.80	2.92	186	75	10.40	33.57	3.89	25.80	221	0.21
179	8.67	33.96	2.20	166	100	9.78	33.66	3.39	25.97	205	0.27
229	8.34	34.13	1.44	148	150	9.00	33.86	2.65	26.25	178	0.36
334	7.54	34.22	0.89	130	200	8.52	34.05	1.84	26.47	157	0.45
434	6.57	34.27	-	114	250	8.21	34.16	1.29	26.60	144	0.52
					300	7.83	34.20	1.03	26.69	136	0.60
					400	6.91	34.26		26.87	119	0.73
77.60	ORCA; August 15, 1959; 0515 GCT; 34°43.5'N, 121°35.5'W; sounding, 550 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 05°.										
1	16.72	33.59	5.50	342	0	(16.72)	(33.59)	(5.50)	(24.52)	(342)	(0.00)
11	16.60	33.58	5.59	341	10	16.61	33.58	5.59	24.54	341	0.03
31	12.50	33.28	5.28	280	20	16.55	33.58	5.59	24.55	340	0.07
41	11.77	33.33	4.98	262	30	12.80	33.29	5.34	25.13	284	0.10
51	11.40	33.48	4.65	245	50	11.44	33.47	4.69	25.52	247	0.15
66	10.54	33.55	4.04	226	75	9.85	33.60	3.74	25.90	211	0.21
81	9.52	33.64	3.53	202	100	9.31	33.77	2.94	26.12	190	0.26
100	9.31	33.77	2.94	190	150	8.80	34.02	1.84	26.40	163	0.35
125	9.22	33.98	2.07	173	200	7.70	34.07	1.80	26.60	144	0.43
145	8.94	34.02	1.81a)	166	250	7.34	34.08	1.32	26.67	138	0.50
175	8.00	34.00	2.18	153	300	6.99	34.14	1.02	26.76	129	0.57
205	7.66	34.07	1.76	143	400	6.52	34.24	0.52	26.91	115	0.70
235	7.43	34.07	1.45	140	500	5.82	34.27	0.42	27.03	104	0.81
275	7.18	34.11	1.17	134							
335	6.74	34.17	0.83	124							
410	6.48	34.25	0.50	114							
485	5.90	34.27	0.43	106							
566	5.56	34.29	0.29	100							
80.52	ORCA; August 15, 1959; 1734 GCT; 34°25'N, 120°36'W; sounding, 150 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 03°.										
1	17.69	33.71	5.26	356	0	(17.69)	(33.71)	(5.26)	(24.38)	(356)	(0.00)
11	15.33	33.62	5.03	310	10	15.35	33.62	5.04	24.86	311	0.03
31	13.18	33.64	4.41	266	20	14.76	33.62	4.94	24.99	298	0.06
51	12.54	33.63	4.15	254	30	13.21	33.64	4.44	25.31	267	0.09
76	11.67	33.62	3.83	240	50	12.60	33.63	4.17	25.44	255	0.14
100	11.02	33.66	3.60	226	75	11.69	33.62	3.84	25.60	240	0.21
125	10.10	33.75	3.38	204	100	11.02	33.66	3.60	25.74	226	0.26
165	9.50	33.89	2.54	184	150	9.64	33.85	2.76	26.12	189	0.37
205	9.38	33.95	2.32	177	200	9.39	33.94	2.36	26.25	178	0.46

a) Alternate value, 1.93 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; August 15, 1959; 1950 GCT; 34°21.5'N, 120°49'W; sounding, 420 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 15°. 80.55

2	17.66	33.68	5.53	357	0	(17.66)	(33.68)	(5.53)	(24.37)	(357)	(0.00)
12	17.48	33.71	5.56	350	10	17.49	33.71	5.56	24.43	351	0.04
31	16.92	33.66	5.40	342	20	17.47	33.71	5.55	24.44	350	0.07
40	14.78	33.69	5.03	294	30	16.93	33.66	5.41	24.52	342	0.10
50	12.87	33.63	4.29	260	50	12.87	33.63	4.29	25.38	260	0.16
64	12.24	33.66	4.17	247	75	11.00	33.67	3.65	25.76	224	0.23
79	10.79	33.68	3.53	220	100	10.02	33.73	3.15	25.98	204	0.28
98	10.08	33.73	3.16	205	150	9.22	33.91	2.40	26.25	177	0.38
121	9.50	33.86	2.76	186	200	8.79	34.06	1.88	26.44	160	0.46
140	9.30	33.89	2.51	180	250	8.39	34.18	1.38	26.59	146	0.54
169	9.07	33.98	2.18	170	300	7.57	34.15	1.20	26.69	136	0.61
197	8.82	34.05	1.93	162	400	6.47	34.20	0.87	26.89	117	0.74
225	8.59	34.11	1.62	153	500	6.01	34.23	0.51	26.96	110	0.86
263	8.26	34.19	1.29	143							
321	7.20	34.14	1.16	132							
393	6.50	34.20	0.88	118							
466	6.14	34.22	0.55	112							
544	5.84	34.24	0.48	108							

ORCA; August 15, 1959; 2328 GCT; 34°11'N, 121°11'W; sounding, 1200 fm; wind, 180°, force 1; weather, partly cloudy; sea, moderate; wire angle, 04°. 80.60

1	17.78	33.68	5.51	360	0	(17.78)	(33.68)	(5.51)	(24.34)	(360)	(0.00)
11	16.58	33.67	5.62	333	10	16.62	33.67	5.62	24.60	335	0.03
31	13.00	33.60	4.49	266	20	15.90	33.68	5.44	24.78	318	0.07
41	11.43	33.58	3.90	238	30	13.25	33.60	4.57	25.29	269	0.10
51	10.56	33.65	3.54	218	50	10.60	33.64	3.57	25.80	220	0.15
66	9.76	33.77	3.15	196	75	9.66	33.79	3.09	26.08	194	0.20
80	9.62	33.80	3.04	192	100	9.30	33.90	2.51	26.23	180	0.24
100	9.30	33.90	2.51	180	150	9.01	34.04	1.92	26.38	166	0.33
125	9.07	33.99	2.10	170	200	8.82	34.18	1.37	26.52	152	0.41
145	9.03	34.02	1.98	167	250	8.52	34.22	1.20	26.60	144	0.49
175	8.78	34.11	1.59	156	300	8.16	34.24	0.96	26.67	138	0.56
205	8.82	34.19	1.35	151	400	7.28	34.27	0.68	26.83	123	0.70
235	8.63	34.20	1.29	148	500	6.63	34.28	0.44	26.92	114	0.82
274	8.32	34.23	1.06	140							
334	7.88	34.24	0.83	134							
409	7.20	34.27	0.65	122							
484	6.76	34.28	0.46	116							
563	5.98	34.30	0.43	104							

ORCA; August 16, 1959; 0525 GCT; 33°51'N, 121°54'W; sounding, 2000 fm; wind, direction missing, force 1; weather, cloudy; sea, moderate; wire angle, 00°. 80.70

1	17.28	33.59	5.46	355	0	(17.28)	(33.59)	(5.46)	(24.39)	(355)	(0.00)
11	17.04	33.60	5.53	349	10	17.05	33.60	5.53	24.45	349	0.04
31	15.35	33.64	5.40	309	20	17.00	33.60	5.54	24.46	348	0.07
41	13.30	33.60	4.97	271	30	15.42	33.64	5.41	24.85	311	0.10
51	11.35	33.66	3.98	231	50	11.65	33.67	4.13	25.64	236	0.16
66	10.20	33.75	3.14	205	75	9.94	33.82	2.90	26.07	195	0.21
81	9.29	33.81	2.77	186	100	8.89	33.87	2.69	26.27	176	0.26
101	8.87	33.87	2.69	176	150	8.54	34.04	1.97	26.47	157	0.34
126	8.56	33.91	2.61	168	200	7.45	34.02	1.99	26.61	144	0.42
146	8.57	34.04	1.96	158	250	6.75	34.04	1.77	26.72	133	0.49
176	7.72	34.00	2.36	149	300	6.35	34.08	1.20	26.81	125	0.56
206	7.38	34.03	1.93	142	400	5.69	34.17	0.69	26.96	111	0.68
236	6.94	34.04	1.90	136	500	5.52	34.28	0.37	27.07	100	0.79
275	6.46	34.05	1.52	129							
335	6.23	34.14	0.86	120							
410	5.63	34.17	0.66	110							
485	5.58	34.27	0.40	102							
565	5.22	34.33	0.30	94							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

8080 ORCA; August 16, 1959; 1130 GCT; 33°29'N, 122°35'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, overcast; sea, calm; wire angle, 05°.

1	17.81	33.42	5.27	380	0	(17.81)	(33.42)	(5.27)	(24.13)	(380)	(0.00)
11	17.80	33.42	5.30	380	10	17.80	33.42	5.30	24.13	380	0.04
31	17.24	33.43	5.39	366	20	17.80	33.42	5.30	24.13	380	0.08
41	15.18	33.40	5.76	323	30	17.26	33.43	5.39	24.27	366	0.11
51	13.92	33.40	5.53	298	50	13.93	33.40	5.54	24.98	298	0.18
66	11.93	33.22	5.22	273	75	11.68	33.32	4.96	25.36	262	0.25
80	11.62	33.35	4.88	259	100	10.68	33.51	4.40	25.69	231	0.31
100	10.68	33.51	4.40	231	150	9.05	33.83	2.93	26.22	181	0.41
125	9.20	33.73	3.53	191	200	8.33	33.98	2.49	26.45	159	0.50
144	9.10	33.82	2.94	182	250	7.87	34.07	1.59	26.59	146	0.58
174	8.64	33.89	2.90	171	300	7.35	34.12	1.27	26.70	135	0.65
203	8.30	33.99	2.42	158	400	6.41	34.16	0.72	26.86	120	0.78
233	8.02	34.05	1.73	150	500	5.89	34.24	0.50	26.99	108	0.90
273	7.62	34.10	1.43	140							
333	7.00	34.14	1.08	129							
408	6.35	34.16	0.70	119							
483	5.97	34.22	0.53	110							
563	5.53	34.29	0.35	100							

8090 ORCA; August 16, 1959; 1803 GCT; 33°05'N, 123°17'W; sounding, 2300 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 00°.

1	17.95	33.53	4.87	374	0	(17.95)	(33.53)	(4.87)	(24.18)	(374)	(0.00)
11	17.96	33.51	4.82	376	10	17.96	33.51	4.82	24.16	376	0.04
31	17.41	33.59	5.10	358	20	17.96	33.51	4.82	24.16	376	0.08
41	14.90	33.66	5.28	298	30	17.42	33.59	5.09	24.35	358	0.11
51	13.76	33.59	4.90	280	50	14.00	33.60	5.01	25.12	285	0.18
66	11.92	33.66	4.03	241	75	11.21	33.72	3.52	25.76	224	0.24
81	10.70	33.75	3.21	213	100	9.65	33.78	2.75	26.08	194	0.29
101	9.64	33.78	2.74	194	150	8.78	33.99	2.21	26.38	165	0.38
126	9.22	33.93	2.32	176	200	8.24	34.04	2.04	26.51	153	0.46
146	8.80	33.97	2.18	167	250	7.30	34.04	2.15	26.64	141	0.54
175	8.64	34.05	2.32	159	300	6.60	34.03	1.78	26.74	132	0.61
205	8.12	34.04	1.98	152	400	5.67	34.08	1.04	26.90	117	0.74
235	7.54	34.04	2.26	144	500	5.51	34.25	0.40	27.04	102	0.85
275	6.95	34.04	1.93	136							
335	6.12	34.03	1.54	126							
409	5.62	34.10	0.96	115							
484	5.58	34.23	0.46	104							
565	5.18	34.27	0.34	97							

8247 ORCA; August 18, 1959; 0020 GCT; 34°14'N, 119°58'W; sounding, 310 fm; wind, 310°, force 2; weather, partly cloudy; sea, slight; wire angle, 10°.

0	19.60	33.68	5.45	404	0	19.60	33.68	5.45	23.88	404	0.00
10	17.79	33.62	5.78	364	10	17.79	33.62	5.78	24.29	364	0.04
29	15.72	33.58	5.55	321	20	17.12	33.61	5.76	24.44	350	0.07
39	13.96	33.53	4.91	288	30	15.68	33.58	5.54	24.76	320	0.11
49	12.94	33.50	4.47	271	50	12.78	33.50	4.39	25.30	268	0.17
59	11.60	33.55	3.91	244	75	10.72	33.60	3.62	25.76	224	0.23
69	10.99	33.57	3.68	231	100	10.01	33.71	3.16	25.96	206	0.28
83	10.44	33.65	3.53	216	150	9.44	33.84	2.68	26.16	186	0.38
98	10.05	33.70	3.17	206	200	9.20	34.02	1.90	26.34	169	0.47
113	9.83	33.77	3.05	198	250	8.85	34.14	1.30	26.49	155	0.56
138	9.54	33.81	2.78	190	300	8.19	34.16	0.99	26.61	144	0.63
167	9.32	33.90	2.49	180	400	7.28	34.20	0.52	26.77	129	0.77
202	9.19	34.03	1.87	168	500	6.59	34.22	0.11	26.89	118	0.90
251	8.84	34.14	1.29	155							
300	8.19	34.16	0.99	144							
406	7.22	34.20	0.49	128							
506	6.54	34.22	0.09	117							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δ_{T} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T} 10^{-5} cm^3/g	ΔD dyn. m	
ORCA; August 18, 1959; 0542 GCT; 34°14'N, 119°23'W; sounding, 14 fm; wind, 300°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.												83.40
0	19.94	33.72	5.46	409	0	19.94	33.72	5.46	23.82	409	0.00	
10	17.72	33.65	5.68	361	10	17.72	33.65	5.68	24.33	361	0.04	
ORCA; August 18, 1959; 0349 GCT; 34°07.5'N, 119°33.5'W; sounding, 142 fm; wind, 300°, force 2; weather, clear; sea, slight; wire angle, 06°.												83.43
1	20.47	33.73	5.49	422	0	(20.47)	(33.73)	(5.49)	(23.69)	(422)	(0.00)	
11	19.99	33.71	5.60	411	10	20.09	33.71	5.58	23.78	413	0.04	
31	17.82	33.67	5.36	362	20	19.50	33.71	5.58	23.94	398	0.08	
51	13.57	33.57	4.77	278	30	18.05	33.68	5.38	24.26	367	0.12	
76	11.22	33.63	3.88	231	50	13.68	33.57	4.77	25.17	280	0.18	
100	9.81	33.82	3.19	194	75	11.30	33.62	3.90	25.67	233	0.25	
125	9.46	33.87	2.89	185	100	9.81	33.82	3.19	26.08	194	0.30	
165	9.10	34.00	2.31	169	150	9.20	33.95	2.52	26.29	175	0.40	
206	8.92	34.06	1.94	162	200	8.94	34.05	1.99	26.41	163	0.48	
ORCA; August 17, 1959; 2032 GCT; 33°52'N, 120°07.5'W; sounding, 84 fm; wind, 270°, force 1; weather, cloudy; sea, slight; wire angle, 06°.												83.51
1	19.52	33.72	5.49	398	0	(19.52)	(33.72)	(5.49)	(23.93)	(398)	(0.00)	
11	19.05	33.73	5.44	386	10	19.09	33.73	5.44	24.05	387	0.04	
31	16.08	33.61	5.90	327	20	18.40	33.71	5.53	24.21	372	0.08	
51	14.10	33.55	5.25	290	30	16.18	33.62	5.90	24.66	329	0.11	
76	12.02	33.57	4.22	250	50	14.20	33.55	5.30	25.05	292	0.17	
100	10.30	33.68	3.49	212	75	12.09	33.57	4.23	25.49	250	0.24	
					100	10.30	33.68	3.49	25.89	212	0.30	
ORCA; August 17, 1959; 1824 GCT; 33°41.5'N, 120°20'W; sounding, 550 fm; wind, 300°, force 1; weather, overcast; sea, slight; wire angle, 10°.												83.55
1	18.50	33.73	5.67	373	0	(18.50)	(33.73)	(5.67)	(24.20)	(373)	(0.00)	
11	17.54	33.69	5.76	354	10	17.69	33.70	5.75	24.37	356	0.04	
31	14.24	33.64	4.83	286	20	16.05	33.66	5.41	24.73	322	0.07	
41	13.24	33.62	4.51	268	30	14.29	33.64	4.85	25.10	287	0.10	
50	12.36	33.60	4.29	254	50	12.36	33.60	4.29	25.45	254	0.15	
65	11.22	33.62	3.90	232	75	11.00	33.64	3.76	25.74	226	0.21	
80	10.50	33.68	3.52	215	100	9.16	33.91	2.76	26.26	177	0.27	
100	9.16	33.91	2.76	177	150	8.98	33.98	2.38	26.34	169	0.35	
124	9.08	33.93	2.54	174	200	8.69	34.13	1.88	26.50	154	0.44	
144	9.00	33.96	2.47	171	250	8.49	34.18	1.45	26.58	147	0.51	
174	8.84	34.05	2.12	162	300	8.09	34.23	1.24	26.68	137	0.59	
203	8.68	34.13	1.86	153	400	7.39	34.25	0.84	26.80	126	0.72	
233	8.58	34.16	1.57	149	500	6.89	34.29	0.68	26.90	116	0.85	
272	8.32	34.20	1.34	143								
332	7.81	34.25	1.11	132								
405	7.36	34.25	0.81	126								
480	6.99	34.28	0.72	118								
560	6.52	34.30	0.55	110								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m

83.60 ORCA; August 17, 1959; 1605 GCT; 33°34'N, 120°32'W; sounding, 500 fm; wind, 300°, force 1; weather, overcast; sea, slight; wire angle, 10°.

1	18.12	33.71	5.55	366	0	(18.12)	(33.71)	(5.55)	(24.27)	(366)	(0.00)
11	17.40	33.68	5.64	351	10	17.43	33.68	5.63	24.42	352	0.04
31	15.94	33.61	5.15	324	20	17.10	33.67	5.56	24.50	345	0.07
41	14.82	33.57	5.13	304	30	16.02	33.62	5.16	24.70	325	0.10
50	13.91	33.60	4.83	283	50	13.91	33.60	4.83	25.14	283	0.16
65	12.32	33.59	4.37	253	75	11.69	33.60	4.08	25.58	242	0.23
79	11.38	33.60	3.93	236	100	10.00	33.74	3.19	25.99	203	0.29
123	9.58	33.78	2.97	192	150	9.11	33.92	2.51	26.28	175	0.38
143	9.22	33.87	2.67	181	200	8.53	34.06	1.82	26.48	156	0.47
172	8.78	34.02	2.14	162	250	8.19	34.16	1.53	26.60	144	0.54
202	8.51	34.07	1.78	155	300	7.86	34.19	1.31	26.68	137	0.62
231	8.32	34.13	1.57	148	400	7.07	34.27	0.71	26.85	121	0.75
270	8.04	34.17	1.48	141	500	6.06	34.29	0.48	27.01	106	0.87
330	7.63	34.20	1.12	134							
404	7.02	34.27	0.70	120							
478	6.20	34.28	0.50	108							
559	5.78	34.33	0.43	100							

83.70 ORCA; August 17, 1959; 1027 GCT; 33°14'N, 121°16'W; sounding, 2000 fm; wind, calm; weather, overcast; sea, slight; wire angle, 05°.

1	17.33	33.66	5.59	351	0	(17.33)	(33.66)	(5.59)	(24.43)	(351)	(0.00)
11	16.97	33.62	5.64	346	10	16.99	33.62	5.64	24.48	346	0.03
31	14.93	33.58	5.13	305	20	16.50	33.61	5.54	24.59	336	0.07
41	11.83	33.24	5.18	270	30	14.97	33.58	5.14	24.91	305	0.10
51	10.96	33.35	4.91	247	50	11.00	33.34	4.96	25.51	248	0.16
66	10.24	33.46	4.33	227	75	10.02	33.67	3.98	25.93	208	0.21
81	9.98	33.70	3.88	205	100	9.61	33.72	3.28	26.04	198	0.26
100	9.61	33.72	3.28	198	150	8.49	33.88	3.06	26.35	168	0.36
125	8.96	33.84	2.98	179	200	8.11	33.97	2.40	26.49	155	0.44
145	8.51	33.87	3.92u	170	250	7.62	34.06	1.80	26.62	143	0.52
175	8.38	33.93	3.56u	164	300	7.01	34.10	1.26	26.73	132	0.59
204	8.07	33.98	2.35	156	400	6.19	34.19	0.85	26.92	115	0.71
234	7.79	34.04	1.99	147	500	5.64	34.26	0.39	27.04	103	0.83
274	7.32	34.08	1.49	138							
333	6.64	34.14	1.05	125							
408	6.14	34.20	0.80	114							
483	5.72	34.25	0.44	105							
563	5.42	34.29	0.33	99							

83.80 ORCA; August 17, 1959; 0445 GCT; 32°54'N, 122°02'W; sounding, 2300 fm; wind, direction missing, force 1; weather, overcast; sea, slight; wire angle, 05°.

1	17.02	33.24	5.56	375	0	(17.02)	(33.24)	(5.56)	(24.18)	(375)	(0.00)
11	16.74	33.22	5.69	370	10	16.74	33.22	5.68	24.23	370	0.04
31	15.09	33.30	5.85	328	20	16.34	33.24	5.78	24.34	360	0.07
41	14.91	33.34	5.64	322	30	15.11	33.30	5.85	24.66	329	0.11
51	13.36	33.17	5.49	304	50	13.70	33.20	5.52	24.88	308	0.17
66	12.84	33.33	5.25	282	75	12.46	33.35	5.14	25.24	274	0.24
81	12.14	33.35	5.07	268	100	11.00	33.44	4.57	25.58	241	0.31
101	10.92	33.45	4.52	239	150	9.23	33.73	3.44	26.10	192	0.42
126	9.88	33.64	3.66	208	200	8.67	34.02	1.98	26.42	162	0.51
146	9.32	33.71	3.47	194	250	7.97	34.10	1.53	26.60	145	0.59
176	8.84	33.87	3.12	175	300	7.39	34.13	1.21	26.70	135	0.66
206	8.61	34.04	1.85	159	400	6.36	34.14	0.92	26.85	121	0.79
236	8.16	34.07	1.64	150	500	5.91	34.26	0.51	27.01	106	0.91
275	7.66	34.13	1.36	139							
335	7.01	34.13	1.07	130							
410	6.29	34.14	0.88	120							
485	5.99	34.25	0.55	108							
566	5.54	34.29	0.41	100							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T_3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

ORCA; August 16, 1959; 2311 GCT; 32°34'N, 122°49'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, overcast; sea, moderate; wire angle, 05°. 83.90

1	18.42	33.44	5.35	392	0	(18.42)	(33.44)	(5.35)	(24.00)	(392)	(0.00)
11	18.02	33.37	5.35	388	10	18.03	33.37	5.35	24.04	388	0.04
31	17.56	33.48	5.38	369	20	18.01	33.37	5.35	24.04	388	0.08
41	16.70	33.49	5.64	351	30	17.57	33.48	5.37	24.24	370	0.12
50	14.97	33.45	5.76	315	50	14.97	33.45	5.76	24.81	315	0.18
65	13.85	33.44	5.44	293	75	13.14	33.47	5.10	25.20	278	0.26
80	12.71	33.49	4.89	268	100	10.86	33.51	4.28	25.66	234	0.32
100	10.86	33.51	4.28	234	150	8.92	33.77	3.60	26.19	184	0.43
125	9.76	33.62	3.89	208	200	8.27	33.98	2.39	26.45	159	0.52
145	9.00	33.75	3.69	186	250	7.51	34.00	1.92	26.58	146	0.59
174	8.61	33.86	3.03	172	300	6.99	34.04	1.48	26.69	136	0.67
204	8.20	33.98	2.31	158	400	6.27	34.15	0.79	26.87	119	0.80
233	7.78	33.98	2.06	151	500	5.62	34.22	0.52	27.01	106	0.92
273	7.22	34.04	1.70	140							
333	6.72	34.05	1.27	132							
408	6.20	34.16	0.75	118							
482	5.72	34.21	0.55	108							
562	5.36	34.27	0.37	99							

ORCA; August 18, 1959; 1043 GCT; 33°49'N, 118°38'W; sounding, 250 fm; wind, direction missing, force 1; weather, overcast; sea, calm; wire angle, 02°. 87.35

1	19.04	33.64	5.59	393	0	(19.04)	(33.64)	(5.59)	(23.99)	(393)	(0.00)
11	18.56	33.58	5.78	385	10	18.65	33.59	5.77	24.05	387	0.04
31	13.29	33.53	5.12	276	20	15.90	33.55	5.50	24.68	327	0.07
51	11.90	33.55	4.05	248	30	13.46	33.53	5.17	25.18	279	0.10
76	10.74	33.64	3.60	222	50	11.92	33.54	4.09	25.49	250	0.16
101	10.36	33.69	3.58	212	75	10.76	33.64	3.60	25.78	223	0.22
125	9.96	33.69	3.50	205	100	10.38	33.69	3.59	25.89	212	0.27
165	9.50	33.86	2.96	186	150	9.64	33.77	3.24	26.07	195	0.38
205	9.22	34.07	2.20	166	200	9.26	34.07	2.25	26.36	167	0.47
254	8.81	34.08	1.89	159	250	8.85	34.08	1.94	26.44	160	0.55
304	8.36	34.18	1.32	145	300	8.39	34.18	1.37	26.59	146	0.63
409	7.40	34.22	0.91	128	400	7.49	34.22	0.93	26.76	130	0.77

ORCA; August 18, 1959; 1333 GCT; 33°41'N, 118°59.5'W; sounding, 450 fm; wind, 160°, force 1; weather, overcast; sea, calm; wire angle, 02°. 87.40

1	21.01	33.77	5.16	432	0	(21.01)	(33.77)	(5.16)	(23.58)	(432)	(0.00)
11	20.92	33.76	5.16	430	10	20.94	33.76	5.16	23.59	431	0.04
31	16.48	33.56	5.75	339	20	19.71	33.72	5.36	23.88	403	0.08
41	15.38	33.58	5.74	314	30	16.60	33.56	5.74	24.52	342	0.12
51	14.34	33.54	5.41	296	50	14.45	33.54	5.46	25.00	297	0.19
66	12.82	33.56	4.58	265	75	12.02	33.55	4.30	25.48	251	0.25
81	11.58	33.55	4.14	243	100	10.60	33.66	3.70	25.82	218	0.31
101	10.56	33.67	3.68	217	150	9.00	33.85	2.87	26.24	179	0.42
126	9.80	33.71	3.45	202	200	8.29	34.06	1.82	26.51	153	0.50
146	9.11	33.82	2.99	183	250	7.79	34.16	1.39	26.67	138	0.58
176	8.51	33.98	2.30	162	300	7.57	34.20	1.06	26.73	132	0.64
206	8.24	34.07	1.75	152	400	6.92	34.26	0.66	26.87	119	0.78
235	7.88	34.13	1.54	142	500	6.38	34.29	0.41	26.97	110	0.90
275	7.71	34.19	1.14	135							
335	7.31	34.20	0.98	128							
410	6.88	34.27	0.59	118							
485	6.47	34.29	0.44	111							
565	5.99	34.33	0.31	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
87.45	ORCA; August 18, 1959; 1636 GCT; 33°31.5'N, 119°20.5'W; sounding, 950 fm; wind, 210°, force 2; weather, overcast; sea, slight; wire angle, 05°.										
0	20.05	33.69	5.18	414	0	20.05	33.69	5.18	23.77	414	0.00
10	19.72	33.67	5.30	407	10	19.72	33.67	5.30	23.84	407	0.04
30	17.12	33.58	5.75	352	20	19.20	33.65	5.42	23.96	396	0.08
40	15.49	33.52	5.90	321	30	17.12	33.58	5.75	24.42	352	0.12
50	13.90	33.49	5.37	291	50	13.90	33.49	5.37	25.06	291	0.18
65	12.70	33.56	4.44	262	75	12.00	33.56	4.15	25.49	250	0.25
80	11.70	33.55	4.06	245	100	10.82	33.62	3.70	25.75	225	0.31
100	10.82	33.62	3.70	225	150	8.98	33.88	2.68	26.27	176	0.42
124	9.91	33.68	3.41	206	200	8.64	34.04	1.81	26.45	159	0.50
144	9.04	33.87	2.74	178	250	8.38	34.13	1.44	26.56	149	0.58
173	8.86	33.94	2.50	170	300	8.10	34.16	1.25	26.62	143	0.65
203	8.61	34.05	1.74	158	400	7.33	34.22	0.79	26.78	128	0.79
232	8.46	34.12	1.52	150	500	6.49	34.25	0.50	26.92	114	0.92
272	8.29	34.13	1.39	148							
332	7.90	34.20	1.08	137							
407	7.29	34.22	0.77	127							
482	6.60	34.24	0.53	116							
563	6.17	34.29	0.40	107							
87.55	ORCA; August 18, 1959; 2217 GCT; 33°08'N, 120°02'W; sounding, 700 fm; wind, 250°, force 2; weather, overcast; sea, moderate; wire angle, 07°.										
1	20.00	33.78	5.17	406	0	(20.00)	(33.78)	(5.17)	(23.85)	(406)	(0.00)
11	19.61	33.82	5.25	394	10	19.65	33.82	5.25	23.98	394	0.04
31	16.76	33.66	5.20	338	20	18.51	33.77	5.24	24.23	370	0.08
41	12.94	33.56	4.87	267	30	16.87	33.67	5.21	24.55	340	0.11
50	12.16	33.59	4.12	250	50	12.16	33.59	4.12	25.49	250	0.17
65	10.30	33.74	3.35	207	75	9.90	33.77	3.10	26.03	198	0.23
80	9.80	33.78	3.01	196	100	9.60	33.82	2.87	26.12	190	0.28
100	9.60	33.82	2.87	190	150	8.81	33.97	2.29	26.36	167	0.37
125	9.06	33.89	2.71	177	200	8.37	34.10	1.84	26.54	151	0.45
145	8.85	33.96	2.35	168	250	7.99	34.17	1.34	26.65	140	0.52
175	8.53	34.04	1.92	158	300	7.48	34.26	0.92	26.78	127	0.59
205	8.34	34.11	1.81	150	400	6.88	34.31	0.59	26.91	115	0.72
234	8.14	34.14	1.54	144	500	6.32	34.31	0.41	26.99	108	0.83
273	7.70	34.22	1.05	132							
333	7.27	34.27	0.83	123							
408	6.84	34.32	0.55	114							
483	6.42	34.31	0.41	110							
563	5.80	34.33	0.48	100							
87.60	ORCA; August 19, 1959; 0112 GCT; 32°58'N, 120°21'W; sounding, 410 fm; wind, 290°, force 2; weather, overcast; sea, moderate; wire angle, 16°.										
0	19.78	33.82	5.40	397	0	19.78	33.82	5.40	23.95	397	0.00
10	19.41	33.77	5.57	393	10	19.41	33.77	5.57	23.99	393	0.04
29	17.50	33.71	5.75	351	20	17.72	33.72	5.75	24.38	355	0.08
38	17.05	33.66	5.74	345	30	17.48	33.71	5.75	24.43	351	0.11
48	15.62	33.62	5.41	316	50	14.23	33.62	4.94	25.09	288	0.18
62	12.42	33.62	4.37	254	75	10.21	33.68	3.44	25.91	210	0.24
76	10.16	33.69	3.39	208	100	9.42	33.87	2.64	26.19	184	0.29
95	9.52	33.85	2.72	187	150	8.62	33.96	2.37	26.39	165	0.38
119	9.02	33.93	2.45	174	200	8.07	34.17	1.62	26.64	141	0.45
138	8.78	33.95	2.42	168	250	7.90	34.16	1.13	26.65	140	0.53
167	8.37	34.03	2.06	156	300	7.39	34.20	0.89	26.75	130	0.60
195	8.09	34.17	1.65	142	400	6.48	34.27	0.54	26.94	113	0.72
224	7.95	-	1.28		500	6.08	34.30	0.40	27.01	106	0.84
263	7.90	34.16	1.11	140							
321	7.10	34.22	0.81	124							
393	6.51	34.27	0.55	113							
467	6.24	34.29	0.42	108							
546	5.86	34.32	0.38	102							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m	

ORCA; August 19, 1959; 0205 GCT;[a] 32°58'N, 120°21'W; sounding, 410 fm; wind, 290°, force 2; weather, overcast; sea, moderate; wire angle, 10°. 87.60

1	19.66	33.77	5.51	398	0	(19.66)	(33.77)	(5.51)	(23.93)	(398)	(0.00)	
11	19.46	33.75	5.64	394	10	19.49	33.75	5.62	23.97	395	0.04	
30	16.92	33.64	5.78	343	20	17.48	33.66	5.77	24.38	355	0.08	
35	16.83	33.62	5.74	343	30	16.92	33.64	5.78	24.51	343	0.11	
40	16.44	33.60	5.68	336	50	14.29	33.57	5.18	25.05	292	0.18	
45	15.13	33.57	5.43	310	75	10.66	33.58	3.80	25.75	225	0.24	
50	14.29	33.57	5.18	292	100	9.60	33.78	2.79	26.09	193	0.29	
55	13.20	33.57	4.73	271	150	8.71	33.96	2.25	26.38	166	0.38	
60	12.88	33.58	4.57	264	200	(8.04)	(34.13)	(1.42)	(26.61)	(144)	(0.46)	
65	12.25	33.58	4.30	253								
70	10.86	33.59	3.83	228								
75	10.66	33.58	3.80	225								
80	10.25	33.65	3.50	214								
85	10.01	33.67	3.27	208								
89	9.93	33.69	3.14	205								
94	9.76	33.74	2.91	198								
149	8.72	33.96	2.26	166								
199	8.05	34.13	1.43	144								

ORCA; August 19, 1959; 0730 GCT; 32°34'N, 121°03'W; sounding, 2100 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 10°. 87.70

1	18.00	33.48	5.30	380	0	(18.00)	(33.48)	(5.30)	(24.13)	(380)	(0.00)	
11	18.01	33.50	5.29	379	10	18.01	33.50	5.29	24.14	379	0.04	
31	17.74	33.49	5.40	372	20	17.96	33.50	5.31	24.15	377	0.08	
41	16.48	33.51	5.64	343	30	17.76	33.49	5.38	24.19	373	0.11	
50	15.11	33.46	5.56	317	50	15.11	33.46	5.56	24.78	317	0.18	
65	14.30	33.45	5.49	301	75	13.95	33.49	5.32	25.05	292	0.26	
79	13.82	33.51	5.22	288	100	12.38	33.49	4.67	25.37	262	0.33	
98	12.40	33.49	4.68	262	150	9.18	33.69	3.40	26.08	194	0.44	
123	10.25	33.51	4.14	224	200	8.26	33.95	2.47	26.43	161	0,53	
142	9.36	33.65	3.58	199	250	7.58	34.05	1.76	26.61	144	0.61	
171	8.80	33.82	2.81	178	300	7.16	34.12	1.21	26.72	133	0.68	
200	8.26	33.95	2.47	161	400	6.37	34.22	0.66	26.91	115	0.81	
229	7.76	34.02	2.02	148	500	5.72	34.25	0.43	27.02	105	0.93	
268	7.42	34.07	1.55	140								
327	6.94	34.16	1.02	127								
400	6.37	34.22	0.66	115								
475	5.86	34.24	0.45	108								
555	5.50	34.29	0.39	100								

ORCA; August 19, 1959; 1325 GCT; 32°10'N, 121°44.5'W; sounding, 2000+ fm; wind, 350°, force 5; weather, cloudy; sea, rough; wire angle, 12°. 87.80

1	17.66	33.48	4.73	372	0	(17.66)	(33.48)	(4.73)	(24.21)	(372)	(0.00)	
11	17.69	33.48	4.90	372	10	17.69	33.48	4.90	24.21	372	0.04	
30	17.68	33.48	4.80b)	372	20	17.68	33.48	4.82	24.21	372	0.07	
40	15.98	33.42	5.10c)	338	30	17.68	33.48	4.80	24.21	372	0.11	
55	14.14	33.32	5.48	308	50	14.40	33.34	5.46	24.84	312	0.18	
69	13.52	33.48	5.14	284	75	13.32	33.53	5.04	25.22	276	0.25	
94	11.50	33.53	4.44	243	100	11.22	33.55	4.32	25.63	237	0.32	
113	10.32	33.58	4.07	219	150	9.18	33.72	3.27	26.11	191	0.43	
133	9.72	33.62	3.79	206	200	8.37	33.96	2.34	26.43	161	0.52	
152	9.10	33.73	3.21	189	250	7.80	34.06	1.86	26.58	146	0.60	
181	8.62	33.96	2.50	165	300	7.39	34.15	1.25	26.72	133	0.67	
215	8.18	33.96	2.20	158	400	6.57	34.24	0.76	26.90	116	0.80	
244	7.85	34.04	1.94	148	500	5.84	34.30	0.42	27.05	102	0.91	
292	7.46	34.14	1.32	135	600	(5.40)	(34.33)	(0.36)	(27.12)	(95)	(1.02)	
345	6.91	34.20	1.02	123								
429	6.26	34.24	0.60	112								
513	5.74	34.31	0.40	100								
597	5.41	34.33	0.36	96								

a) Test cast.
b) Alternate value, 5.33 ml/L, not used in interpolation.
c) Alternate value, 5.67 ml/L, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T_3}^{-5}$	Z	T	S	O_2	σ_t	$\delta_{T_3}^{-5}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

87.90 ORCA; August 19, 1959; 1841 GCT; 31°50.5'N, 122°20'W; sounding, 2400 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 20°.

1	18.14	33.51	5.22	381	0	(18.14)	(33.51)	(5.22)	(24.12)	(381)	(0.00)
10	18.14	33.52	5.28	380	10	18.14	33.52	5.28	24.12	380	0.04
29	18.11	33.54	5.24	378	20	18.13	33.53	5.26	24.13	379	0.08
38	17.66	33.58	5.32	364	30	18.11	33.54	5.24	24.14	378	0.11
52	15.51	33.52	5.66	321	50	15.55	33.52	5.66	24.73	322	0.18
66	14.18	33.57	5.42	290	75	13.91	33.57	5.32	25.12	285	0.26
89	12.68	33.56	4.74	262	100	11.73	33.56	4.42	25.54	245	0.33
107	11.26	33.57	4.23	236	150	9.22	33.72	3.66	26.10	192	0.44
125	10.13	33.59	3.88	216	200	8.41	33.96	2.58	26.42	162	0.53
143	9.40	33.68	3.82	198	250	7.63	34.06	2.04	26.60	144	0.60
171	8.88	33.83	3.16	178	300	7.17	34.08	1.51	26.70	136	0.68
202	8.39	33.97	2.57	161	400	6.24	34.16	0.80	26.88	118	0.81
229	7.89	34.04	2.36	148	500	5.60	34.23	0.48	27.02	105	0.93
276	7.34	34.06	1.72	140							
327	7.00	34.12	1.28	130							
407	6.17	34.16	0.77	117							
489	5.66	34.22	0.50	106							
572	5.28	34.30	0.33	96							

90.28 ORCA; August 22, 1959; 1934 GCT; 33°27.5'N, 117°46'W; sounding, 250 fm; wind, 190°, force 1; weather, partly cloudy; sea, slight; wire angle, 08°.

0	19.56	33.63	5.44	406	0	19.56	33.63	5.44	23.86	406	0.00
10	16.56	33.53	5.74	343	10	16.56	33.53	5.74	24.51	343	0.04
30	13.19	33.57	4.35	271	20	14.40	33.55	5.08	25.01	296	0.07
50	12.10	33.58	3.61	250	30	13.19	33.57	4.35	25.27	271	0.10
75	11.60	33.59	3.39	241	50	12.10	33.58	3.61	25.49	250	0.15
99	11.00	-	3.20		75	11.60	33.59	3.39	25.59	241	0.21
124	10.43	33.68	3.25	214	100	10.98	33.64	3.20	25.74	226	0.27
164	9.63	33.78	2.76	194	150	9.92	33.74	2.99	26.00	202	0.38
204	9.28	33.98	2.02	174	200	9.30	33.96	2.10	26.28	175	0.48
253	8.90	34.12	1.53	157	250	8.94	34.12	1.55	26.46	158	0.56
303	8.43	34.16	1.54	148	300	8.46	34.16	1.55	26.56	148	0.64

90.32 ORCA; August 21, 1959; 1538 GCT; 33°20.5'N, 118°03'W; sounding, 400 fm; wind, calm; weather, clear; sea, smooth; wire angle, 01°.

1	21.04	33.68	5.47	440	0	(21.04)	(33.68)	(5.47)	(23.50)	(440)	(0.00)
11	21.01	33.66	5.54	440	10	21.01	33.66	5.54	23.50	440	0.04
31	14.82	33.55	5.99	305	20	18.70	33.61	5.74	24.04	388	0.08
41	13.84	33.61	5.45	281	30	15.30	33.55	5.97	24.81	315	0.12
51	12.90	33.56	4.79	266	50	13.00	33.56	4.86	25.30	268	0.18
66	12.03	33.56	4.25	250	75	11.61	33.56	4.11	25.56	243	0.24
80	11.39	33.57	4.04	238	100	10.41	33.67	3.78	25.86	215	0.30
101	10.34	33.68	3.73	212	150	9.68	33.98	2.42	26.23	180	0.40
126	9.78	33.83	3.00	192	200	8.71	34.02	2.23	26.42	162	0.49
146	9.72	33.96	2.45	182	250	8.35	34.12	1.58	26.56	149	0.57
176	9.30	34.02	2.35	171	300	7.96	34.14	1.31	26.63	142	0.64
206	8.58	34.02	2.17	160	400	7.12	34.22	0.87	26.82	124	0.78
236	8.44	34.12	1.79	151	500	6.42	34.29	0.51	26.96	111	0.90
276	8.15	34.11	1.46	147							
335	7.64	34.21	1.16	133							
409	7.06	34.23	0.81	123							
485	6.52	34.29	0.51	112							
564	6.11	34.29	0.46	106							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; August 21, 1959; 1232 GCT; 33°10.5'N, 118°24'W; sounding, 650 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 02°.											90.37
0	21.47	33.80	5.06	442	0	21.47	33.80	5.06	23.47	442	0.00
10	21.51	33.80	5.09	443	10	21.51	33.80	5.09	23.46	443	0.04
30	16.10	33.51	5.93	335	20	18.65	33.61	5.64	24.07	386	0.09
40	14.64	33.52	5.85	304	30	16.10	33.51	5.93	24.60	335	0.12
50	13.78	33.56	5.19	283	50	13.78	33.56	5.19	25.14	283	0.18
66	12.56	33.55	4.14	260	75	11.75	33.57	3.87	25.55	244	0.25
80	11.33	33.60	3.80	235	100	10.46	33.71	3.47	25.89	212	0.31
100	10.46	33.71	-	212	150	8.99	33.86	2.84	26.25	178	0.41
126	9.76	33.78	3.17	196	200	8.49	34.02	2.06	26.46	159	0.49
145	9.08	33.84	2.98	181	250	8.12	34.18	1.30	26.63	142	0.57
176	8.66	33.95	2.19	166	300	7.81	34.20	1.09	26.69	136	0.64
206	8.45	34.04	2.02	157	400	6.97	34.28	0.68	26.88	118	0.77
235	8.21	34.15	1.42	145	500	6.11	34.27	0.38	26.98	108	0.89
275	7.99	34.20	1.18	138							
335	7.56	34.19	0.95	133							
410	6.86	34.29	0.66	116							
485	6.20	34.27	0.40	109							
565	5.85	34.31	0.36	102							
ORCA; August 21, 1959; 0755 GCT; 32°54.5'N, 118°56.5'W; sounding, 700 fm; wind, 290°, force 4; weather, partly cloudy; sea, rough; wire angle, 00°.											90.45
1	19.40	33.80	5.16	390	0	(19.40)	(33.80)	(5.16)	(24.02)	(390)	(0.00)
11	19.43	33.82	5.15	389	10	19.42	33.82	5.15	24.03	389	0.04
31	13.36	33.66	4.73	268	20	19.05	33.82	5.10	24.13	380	0.08
41	11.88	33.62	4.08	243	30	13.75	33.68	4.82	25.24	274	0.11
56	10.51	33.72	3.15	212	50	11.02	33.66	3.51	25.76	226	0.16
71	9.82	33.78	2.83	197	75	9.69	33.79	2.80	26.08	194	0.21
96	9.11	33.86	2.66	180	100	9.11	33.89	2.60	26.25	178	0.26
116	9.11	33.99	2.12	170	150	8.78	34.09	1.76	26.46	158	0.34
136	8.91	34.05	1.87	162	200	8.31	34.12	1.50	26.56	149	0.42
156	8.72	34.10	1.71	156	250	8.01	34.21	1.21	26.68	138	0.50
186	8.43	34.10	1.56	152	300	7.53	34.26	0.86	26.78	128	0.56
221	8.14	34.17	1.45	142	400	6.62	34.26	0.52	26.91	116	0.69
251	8.00	34.21	1.21	138	500	6.10	34.34	0.36	27.04	103	0.80
301	7.52	34.26	0.84	127	600	5.60	34.34	0.27	27.10	97	0.91
356	6.95	34.25	0.61	120							
441	6.42	34.29	0.42	110							
526	5.94	34.34	0.32	101							
611	5.56	34.34	0.26	96							
ORCA; August 21, 1959; 0427 GCT; 32°45.5'N, 119°16'W; sounding, 187 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 22°.											90.50
1	18.90	33.80	5.36	378	0	(18.90)	(33.80)	(5.36)	(24.15)	(378)	(0.00)
10	18.92	33.81	5.46	378	10	18.92	33.81	5.46	24.15	378	0.04
30	13.14	33.62	4.56	267	20	18.91	33.81	5.46	24.16	377	0.08
49	10.66	33.64	3.70	221	30	13.14	33.62	4.56	25.32	267	0.11
72	9.58	33.66	3.53	202	50	10.63	33.64	3.69	25.80	221	0.16
95	9.18	33.73	3.25	190	75	9.50	33.67	3.50	26.02	200	0.21
118	8.86	33.86	2.69	176	100	9.11	33.75	3.16	26.15	188	0.26
155	8.55	33.96	2.14	164	150	8.59	33.95	2.18	26.39	165	0.35
193	8.35	34.04	1.92	155	200	8.32	34.05	1.87	26.51	153	0.43
243	8.08	34.15	1.24	143	250	(8.04)	(34.16)	(1.13)	(26.64)	(142)	(0.50)

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

90.55 ORCA; August 21, 1959; 0030, 0101 GCT; 32°31.5'N, 119°33.5'W; sounding, 500 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 22°, 25°.

2	19.66	33.83	5.03	394	0	(19.66)	(33.83)	(5.03)	(23.98)	(394)	(0.00)
10	19.68	33.78	4.95	398	10	19.68	33.78	4.95	23.94	398	0.04
29	16.62	33.73	5.10	330	20	19.67	33.78	4.95	23.94	398	0.08
38	14.06	33.66	4.44	282	30	16.58	33.73	5.10	24.66	329	0.12
51	11.95	33.61	3.88	245	50	12.25	33.61	3.96	25.49	250	0.17
65	11.06	33.66	3.49	226	75	10.58	33.68	3.25	25.84	216	0.23
88	9.86	33.71	3.00	202	100	9.26	33.75	3.16	26.12	190	0.28
106	9.05	33.77	3.22	186	150	8.44	33.94	2.39	26.40	164	0.37
125	8.73	33.90	2.68	171	200	8.31	34.14	1.49	26.57	147	0.45
143	8.52	33.93	2.45	166	250	7.84	34.16	1.20	26.66	139	0.52
170	8.24	33.98	2.14	158	300	7.57	34.18	1.10	26.71	134	0.60
200	8.31	34.14	1.49	147	400	6.62	34.26	0.57	26.92	115	0.72
227	8.15	34.19	1.24	141	500	5.74	34.34	0.35	27.09	98	0.83
270	7.57u	34.12u	1.38u								
319	7.52	34.22	0.96	130							
396	6.67	34.26	0.59	116							
476	5.84	34.32	0.39	102							
558	5.52	34.35	0.31	95							

90.60 ORCA; August 20, 1959; 2105 GCT; 32°17'N, 119°53'W; sounding, 700 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 18°.

1	19.58	33.78	5.22	395	0	(19.58)	(33.78)	(5.22)	(23.97)	(395)	(0.00)
10	19.44	33.76	5.29	394	10	19.44	33.76	5.29	23.98	394	0.04
29	14.70	33.55	5.23	302	20	16.92	33.64	5.27	24.51	343	0.08
39	12.71	33.49	4.67	268	30	14.40	33.54	5.20	25.00	297	0.11
53	11.58	33.53	4.13	244	50	12.10	33.53	4.38	25.45	254	0.16
67	10.78	33.61	3.53	225	75	10.32	33.66	3.25	25.87	214	0.22
91	9.59	33.75	2.92	195	100	9.40	33.77	2.84	26.11	191	0.27
110	9.22	33.79	2.76	187	150	8.62	33.92	2.19	26.35	168	0.36
128	8.90	33.84	2.70	178	200	8.04	34.06	1.76	26.55	149	0.44
147	8.67	33.91	2.23	169	250	7.47	34.10	1.29	26.66	138	0.52
175	8.32	34.02	1.98	156	300	7.02	34.18	0.96	26.79	126	0.59
208	7.96	34.07	1.65	147	400	6.41	34.26	0.61	26.94	112	0.71
236	7.60	34.08	1.41	142	500	6.06	34.29	0.39	27.00	106	0.82
283	7.20	34.16	1.09	130	600	(5.45)	(34.42)		(27.18)	(90)	(0.93)
335	6.71	34.20	0.71	120							
417	6.34	34.27	0.59	111							
500	6.06	34.29	0.39	106							
584	5.58	34.40	0.32	92							

90.70 ORCA; August 20, 1959; 1411 GCT; 31°58.5'N, 120°47'W; sounding, 2000+ fm; wind, 290°, force 4; weather, partly cloudy; sea, rough; wire angle, 09°.

2	17.96	33.51	5.26	376	0	(17.96)	(33.51)	(5.26)	(24.16)	(376)	(0.00)
12	17.98	33.49	5.28	378	10	17.98	33.49	5.28	24.14	378	0.04
32	17.98	33.55	5.30	374	20	17.98	33.49	5.28	24.14	378	0.08
42	16.34	33.46	5.66	344	30	17.98	33.52	5.29	24.16	376	0.11
56	14.62	33.42	5.63	311	50	15.34	33.43	5.64	24.72	324	0.18
72	13.69	33.44	5.14	290	75	13.50	33.44	5.05	25.11	286	0.26
96	11.70	33.48	4.27	250	100	11.48	33.49	4.17	25.53	246	0.33
116	10.58	33.55	3.82	226	150	9.28	33.67	3.27	26.05	197	0.44
135	9.68	33.61	3.45	207	200	8.54	33.90	2.86	26.34	169	0.53
155	9.17	33.68	3.25	194	250	8.15	33.98	2.16	26.48	156	0.62
184	8.69	33.84	3.16	175	300	7.82	34.06	1.61	26.58	146	0.69
218	8.42	33.94	2.44	164	400	7.10	34.33	0.35	26.90	117	0.83
248	8.17	33.98	2.18	157	500	5.74	34.32	0.32	27.07	100	0.94
297	7.82	34.05	1.70	147	600	5.25	34.33	0.27	27.13	94	1.05
351	8.01	34.31	0.57	130							
436	6.48	34.33	0.32	108							
521	5.54	34.31	0.33	98							
605	5.22	34.33	0.27	94							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; August 20, 1959; 0840 GCT; 31°39'N, 121°21'W; sounding, 2000+ fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 12°.											90.80
1	18.62	33.65	5.06	382	0	(18.62)	(33.65)	(5.06)	(24.10)	(382)	(0.00)
11	18.62	33.64	4.99	383	10	18.62	33.64	4.99	24.09	383	0.04
30	18.44	33.64	5.11	378	20	18.58	33.64	5.02	24.10	382	0.08
40	16.48	33.58	5.53	338	30	18.44	33.64	5.11	24.14	378	0.11
55	14.36	33.57	5.50	294	50	14.85	33.57	5.51	24.92	304	0.18
69	13.05	33.53	4.78	272	75	12.42	33.53	4.45	25.38	260	0.25
93	10.70	33.53	3.79	230	100	10.38	33.53	3.74	25.76	224	0.32
113	9.82	33.57	3.69	212	150	8.92	33.78	3.22	26.20	183	0.42
132	9.16	33.71	3.58	192	200	8.19	33.95	2.26	26.44	160	0.50
151	8.90	33.78	3.20	182	250	7.58	34.11	1.77	26.66	139	0.58
180	8.44	33.91	2.49	166	300	7.07	34.08	1.27	26.71	134	0.65
214	8.01	33.96	2.16	156	400	6.42	34.24	0.65	26.92	114	0.78
243	7.65	34.11	1.83	140	500	5.81	34.27	0.30	27.02	105	0.89
292	7.12	34.07	1.37	136	600	(5.33)	(34.34)	(0.30)	(27.14)	(94)	(1.00)
346	6.81	34.20	0.91	122							
429	6.21	34.25	0.56	111							
513	5.74	34.27	0.29	104							
598	5.35	34.34	0.30	94							
ORCA; August 19-20, 1959; 2246, 0043 GCT; 31°24'N, 121°57'W; sounding, 2100 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 16°, 20°.											90.90
2	18.52	33.36	5.22	400	0	(18.52)	(33.36)	(5.22)	(23.92)	(400)	(0.00)
11	18.52	33.37	5.23	400	10	18.52	33.37	5.23	23.92	400	0.04
31	16.97	33.31	5.57	368	20	17.90	33.35	5.39	24.06	386	0.08
40	15.04	33.10	5.76	342	30	17.02	33.32	5.55	24.24	369	0.12
54	13.71	33.04	5.78	320	50	14.02	33.04	5.80	24.69	326	0.19
69	13.80	33.33	5.63	300	75	13.45	33.36	5.50	25.06	290	0.26
93	12.39	33.40	5.12	268	100	11.50	33.42	4.78	25.48	251	0.33
112	10.86	33.46	4.49	238	150	9.48	33.73	3.65	26.07	195	0.44
131	9.82	33.63	3.87	208	200	8.68	33.92	3.21	26.34	169	0.54
150	9.48	33.73	3.65	195	250	7.71	34.06	2.64	26.61	144	0.62
178	8.92	33.87	3.34	176	300	6.90	34.04	2.21	26.70	135	0.69
211	8.54	33.95	3.51	164	400	5.98	34.13	0.88	26.89	117	0.82
240	7.93	34.07	2.72	147	500	5.53	34.23	0.52	27.02	105	0.94
288	7.01	34.04	2.38	137	600	5.11	34.30	0.34	27.13	94	1.04
341	6.56	34.07	1.41	128	700	4.77	34.37	0.30	27.22	86	1.14
425	5.81	34.17	0.76	112	800	4.44	34.44	0.47	27.31	77	1.23
509	5.50	34.23	0.48	104	1000	3.82	34.48	0.66	27.41	68	1.39
593	5.15	34.29	0.34	96	1200	3.33	34.53	0.93	27.50	60	1.53
					1500	2.80	34.56	1.20	27.58	52	1.73
386a)	6.09	34.18u	0.94		2000	2.10	34.62	1.83	27.68	42	2.01
481	5.60	34.22	0.55	106	2500	1.79	34.66	2.30			
577	5.23	34.30	0.38	96	3000	1.65	34.65	2.55			
673	4.86	34.35	0.28	88							
768	4.54	34.42	0.44	79							
960	3.94	34.47	0.60	69							
1151	3.43	34.52	0.90	61							
1344	3.05	34.54	0.97	56							
1537	2.74	34.56	1.26	52							
1730	2.41	34.56	1.44	49							
1926	2.17	34.60	1.76	44							
2122	2.01	34.65	1.93	39							
2321	1.91	34.63	2.19	40							
2523	1.78	34.67	2.32	36							
2722	1.72	34.70u	2.47								
2922	1.67	34.67	2.59	35							
3025	1.63	34.65	2.54	36							
3126	1.61	34.67	2.64	35							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T}{}^{-5}{}_{3}$	Z	T	S	O_2	σ_t	$\delta_{T}{}^{-5}{}_{3}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.28 ORCA; August 14, 1959; 0015 GCT;[a] 32°55'N, 117°21.5'W; sounding, 300+ fm; wind, 270°, force 1; weather, cloudy; sea, slight; wire angle, 07°.

334	8.46	34.23	1.14	142
337	8.44	34.22	1.20	143
340	8.44	34.23	1.09	142
365	8.28	34.25	0.91	138
368	8.28	34.25	0.86	138
371	8.22	34.25	0.88	138
396	7.84	34.25	0.73	133
398	7.82	34.25	0.66	132
401	7.76	34.26	0.66	130
426	7.44	34.25	0.57	127
429	7.41	34.26	0.62	126
432	7.42	34.27	0.61	125
457	7.02	34.27	0.49	120
460	6.99	34.31	0.46	116
463	6.95	34.31	0.56	116
488	6.82	34.29	0.48	116
491	6.80	34.29	0.51	115
494	6.80	34.25	0.64	118

93.28 ORCA; August 23, 1959; 0031 GCT; 32°55'N, 117°21.5'W; sounding, 324 fm;[b] wind, 190°, force 1; weather, cloudy; sea, slight; wire angle, 11°.

1	22.98	33.79	5.20	483	0	(22.98)	(33.79)	(5.20)	(23.04)	(483)	(0.00)
11	20.91	33.71	5.52	434	10	21.14	33.72	5.52	23.50	439	0.05
30	14.46	33.59	5.45	294	20	18.20	33.65	5.52	24.21	372	0.09
40	13.27	33.59	4.46	271	30	14.46	33.59	5.45	25.02	294	0.12
50	12.34	33.55	3.77	257	50	12.34	33.55	3.77	25.42	257	0.18
60	11.80	33.60	3.75	243	75	11.33	33.67	3.19	25.70	230	0.24
69	11.34	33.65	3.43	232	100	11.00	33.66	3.19	25.75	225	0.29
83	11.32	33.68	3.17	229	150	10.16	33.75	3.26	25.97	205	0.40
98	11.02	33.65	3.19	226	200	(9.71)	(33.88)	(2.77)	(26.14)	(188)	(0.50)
112	10.98	33.74	3.18	218							
136	10.40	33.73	3.31	210							
164	9.96	33.78	3.11	198							
197	9.76	33.87	2.79	189							

93.30 ORCA; August 24, 1959; 2114 GCT; 32°50.5'N, 117°32'W; sounding, 400 fm; wind, 190°, force 2; weather, cloudy; sea, smooth; wire angle, 05°.

1	22.69	33.85	4.74	471	0	(22.69)	(33.85)	(4.74)	(23.17)	(471)	(0.00)
11	22.12	33.82	4.71	458	10	22.17	33.82	4.71	23.30	459	0.05
31	16.80	33.58	5.72	345	20	21.32	33.78	4.82	23.49	440	0.09
41	15.44	33.55	5.72	318	30	17.00	33.59	5.72	24.45	349	0.13
51	14.30	33.52	5.13	296	50	14.40	33.52	5.20	24.99	298	0.20
66	12.74	33.51	4.35	267	75	12.24	33.55	3.87	25.44	255	0.26
81	12.02	33.58	3.69	249	100	10.85	33.60	3.63	25.74	227	0.33
100	10.85	33.60	3.63	227	150	9.43	33.77	3.11	26.11	191	0.43
125	10.14	33.67	3.51	210	200	9.14	34.00	2.30	26.33	170	0.52
145	9.55	33.75	3.23	195	250	8.70	34.11	1.84	26.49	155	0.61
175	9.02	33.91	2.58	175	300	8.40	34.20	1.32	26.61	144	0.68
205	9.16	34.02	2.18	169	400	7.48	34.26	0.87	26.78	127	0.82
235	8.61	34.07	1.91	157	500	6.65	34.32	0.44	26.95	112	0.95
275	8.86	34.21	1.30	150							
335	7.68	34.16	1.39	137							
410	7.44	34.27	0.75	126							
484	6.78	34.31	0.47	114							
564	6.22	34.34	0.31	104							

a) Test cast.

b) Ship apparently drifted into shallower water while occupying this station; all Nansen bottles below 197 meters were affected by the cast resting on the bottom.

OBSERVED					INTERPOLATED				COMPUTED			SIO CCOFI 5908
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	
ORCA; August 25, 1959; 0308 GCT; 32°30'N, 118°12.5'W; sounding, 900 fm; wind, 240°, force 1; weather, overcast; sea, slight; wire angle, 07°.												93.40
0	21.88	33.80	4.96	453	0	21.88	33.80	4.96	23.36	453	0.00	
10	20.62	33.75	5.03	424	10	20.62	33.75	5.03	23.67	424	0.04	
30	16.84	33.56	5.50	348	20	19.15	33.67	5.25	23.99	393	0.08	
40	14.12	33.54	5.45	291	30	16.84	33.56	5.50	24.46	348	0.12	
50	13.54	33.48	5.25	285	50	13.54	33.48	5.25	25.13	285	0.18	
65	12.40	33.55	4.47	258	75	11.09	33.62	3.82	25.71	229	0.25	
80	11.06	33.66	3.77	226	100	10.66	33.78	3.07	25.91	210	0.30	
100	10.66	33.78	3.07	210	150	9.72	33.96	2.47	26.20	182	0.40	
124	10.22	33.91	2.40	194	200	9.54	34.18	1.59	26.41	163	0.49	
143	9.80	33.95	2.50	184	250	8.77	34.19	1.41	26.55	150	0.57	
173	9.54	34.07	2.04	171	300	8.35	34.24	1.03	26.65	140	0.65	
202	9.56	34.19	1.59	162	400	7.18	34.23	0.78	26.81	125	0.78	
232	8.82	34.14	1.67	155	500	6.51	34.33	0.45	26.98	109	0.91	
272	8.76	34.24	1.13	146								
333	7.88	34.24	0.96	134								
407	7.12	34.24	0.76	124								
481	6.61	34.31	0.49	112								
561	6.15	34.34	0.39	103								
ORCA; August 25, 1959; 0853 GCT; 32°08.5'N, 118°55'W; sounding, 750 fm; wind, calm; weather, overcast; sea, slight; wire angle, 02°.												93.50
1	21.00	33.79	5.07	431	0	(21.00)	(33.79)	(5.07)	(23.59)	(431)	(0.00)	
11	20.40	33.78	5.17	416	10	20.41	33.77	5.15	23.73	418	0.04	
31	15.90	33.50	5.75	331	20	19.60	33.76	5.30	23.94	398	0.08	
41	15.00	33.49	5.74	313	30	16.00	33.50	5.75	24.62	333	0.12	
51	14.03	33.51	5.41	292	50	14.05	33.50	5.43	25.04	292	0.18	
66	12.86	33.58	4.29	264	75	11.67	33.58	3.98	25.56	243	0.25	
81	11.18	33.58	3.98	234	100	10.44	33.70	3.36	25.88	213	0.31	
101	10.41	33.71	3.33	211	150	8.86	33.86	2.73	26.28	175	0.41	
126	9.50	33.78	3.10	192	200	7.92	34.01	2.15	26.53	151	0.49	
146	8.94	33.86	2.79	177	250	7.37	34.06	1.66	26.65	140	0.56	
176	8.38	33.96	2.39	162	300	7.02	34.11	1.30	26.73	132	0.63	
206	7.80	34.02	2.08	149	400	6.57	34.25	0.62	26.91	115	0.76	
236	7.48	34.04	1.77	143	500	6.20	34.31	0.34	27.01	106	0.88	
276	7.18	34.09	1.45	135								
336	6.80	34.14	1.05	127								
411	6.54	34.27	0.55	114								
486	6.27	34.31	0.34	107								
566	5.89	34.31	0.32	102								
ORCA; August 25, 1959; 1439, 1508 GCT; 31°48'N, 119°37'W; sounding, 1200 fm; wind, 280°, force 2; weather, drizzle; sea, slight; wire angle, 05°, 05°.												93.60
0	18.92	33.45	5.25	404	0	18.92	33.45	5.25	23.88	404	0.00	
10	17.96	33.50	5.41	377	10	17.96	33.50	5.41	24.15	377	0.04	
30	16.92	33.51	5.64	352	20	17.90	33.51	5.43	24.17	376	0.08	
40	15.28	33.49	5.74	319	30	16.92	33.51	5.64	24.41	352	0.11	
50	14.50	33.51	5.55	301	50	14.50	33.51	5.55	24.96	301	0.18	
66	13.45	33.48	5.11	283	75	12.89	33.48	4.91	25.26	272	0.25	
81	12.53	33.48	4.82	266	100	10.82	33.49	4.22	25.66	235	0.31	
100	10.82	33.49	4.22	235	150	8.81	33.88	2.72	26.30	174	0.42	
125	9.23	33.71	3.39	193	200	8.32	34.16	1.72	26.59	146	0.50	
145	8.86	33.86	2.82	176	250	8.01	34.22	1.10	26.68	137	0.57	
174	8.58	33.96	2.40	164	300	7.39	34.22	0.77	26.78	128	0.64	
204	8.26	34.17	1.62	144	400	6.50	34.29	0.50	26.95	111	0.76	
234	8.15	34.20	1.29	140	500	6.10	34.29	0.45	27.00	106	0.88	
273	7.70	34.23	0.92	132								
332	7.06	34.24	0.59	123								
407	6.45	34.29	0.49	111								
483	6.16	34.29	0.46a)	107								
562	5.90	34.29	0.38	104								

a) Alternate value, 0.35 ml/L, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
93.70	ORCA; August 25, 1959; 2052 GCT; 31°27'N, 120°21'W; sounding, 2000 fm; wind, 290°, force 4; weather, overcast; sea, slight; wire angle, 09°.										
1	18.74	33.55	5.22	392	0	(18.74)	(33.55)	(5.22)	(24.00)	(392)	(0.00)
11	18.72	33.53	5.21	393	10	18.73	33.53	5.21	23.99	393	0.04
31	17.98	33.51	5.33	377	20	18.35	33.49	5.24	24.05	387	0.08
41	15.78	33.17	5.87	352	30	18.01	33.50	5.30	24.14	378	0.12
50	14.60	33.24	5.77	323	50	14.60	33.24	5.77	24.73	323	0.19
65	13.73	33.32	5.55	300	75	13.13	33.36	5.28	25.12	285	0.26
80	13.08	33.40	5.17	282	100	11.82	33.49	4.69	25.47	252	0.33
99	11.93	33.48	4.71	254	150	9.34	33.74	3.61	26.10	192	0.44
123	10.56	33.60	4.19	222	200	8.18	33.95	3.09	26.44	160	0.53
143	9.57	33.69	3.61	200	250	7.50	34.02	1.97	26.60	145	0.61
172	8.82	33.87	3.63	175	300	7.01	34.09	1.46	26.72	133	0.68
202	8.14	33.95	3.06	159	400	6.24	34.19	0.73	26.90	116	0.81
231	7.71	34.00	2.22	149	500	5.77	34.26	0.38	27.02	105	0.93
270	7.32	34.04	1.78	141							
330	6.75	34.14	1.13	126							
404	6.22	34.19	0.71	116							
479	5.86	34.23	0.46	108							
559	5.39	34.34	0.28	94							
93.80	ORCA; August 26, 1959; 0155 GCT; 31°10.5'N, 120°55'W; sounding, 2000+ fm; wind, 290°, force 4; weather, overcast; sea, slight; wire angle, 18°.										
0	18.76	33.55	5.20	392	0	18.76	33.55	5.20	24.00	392	0.00
9	18.76	33.55	5.16	392	10	18.75	33.55	5.16	24.00	392	0.04
28	18.60	33.57	5.18	387	20	18.70	33.56	5.16	24.01	391	0.08
37	18.34	33.54	5.27	383	30	18.59	33.57	5.19	24.06	386	0.12
93.90	ORCA; August 26, 1959; 0733 GCT; 30°50'N, 121°35'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, slight; wire angle, 16°.										
2	19.04	33.24	5.15	422	0	(19.04)	(33.24)	(5.15)	(23.69)	(422)	(0.00)
11	19.08	33.24	5.12	422	10	19.08	33.24	5.12	23.68	422	0.04
30	18.15	33.28	5.31	398	20	19.08	33.24	5.12	23.68	422	0.08
40	17.07	33.33	5.57	370	30	18.15	33.28	5.31	23.94	398	0.12
54	15.54	33.22	5.78	344	50	16.13	33.27	5.73	24.41	353	0.20
68	15.12	33.33	5.67	327	75	14.63	33.43	5.52	24.86	310	0.28
91	14.69	33.60	5.45	298	100	13.48	33.44	5.32	25.11	286	0.36
110	12.56	33.35	5.11	276	150	10.21	33.60	4.37	25.84	217	0.49
129	11.48	33.45	4.75	249	200	8.76	33.86	3.61	26.29	174	0.59
147	10.42	33.58	4.42	221	250	8.14	33.95	3.16	26.45	159	0.67
175	9.14	33.77	3.88	187	300	7.28	34.01	2.31	26.62	143	0.75
208	8.64	33.88	3.53	171	400	6.34	34.12	1.00	26.84	122	0.89
236	8.37	33.93	3.35	164	500	5.78	34.20	0.55	26.97	110	1.01
284	7.52	34.00	2.55	147	600	(5.27)	(34.29)		(27.10)	(97)	(1.12)
337	6.84	34.03	1.83	135							
419	6.23	34.15	0.82	119							
503	5.75	34.20	0.54	109							
588	5.31	34.27	0.32	99							
97.30	ORCA; August 28, 1959; 0153 GCT;[a] 32°15'N, 117°06.5'W; sounding, 46 fm; wind, 290°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°.										
1	21.21	33.75	5.08	439	0	(21.21)	(33.75)	(5.08)	(23.50)	(439)	(0.00)
11	20.24	33.71	5.25	418	10	20.33	33.71	5.24	23.72	419	0.04
21	16.54	33.57	5.88	340	20	16.95	33.57	5.86	24.45	349	0.08
31	13.98	33.55	4.82	288	30	14.20	33.55	4.90	25.05	292	0.11
41	13.76	33.60	4.13	280	50	13.67	33.58	4.14	25.18	279	0.17
51	13.66	33.58	4.14	279							
61	13.59	33.58	4.15	278							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

BLACK DOUGLAS; August 13, 1959; 0106 GCT;[a] 32°11.5'N, 117°17'W; sounding, 740 fm; wind, 270°, force 3; weather, partly cloudy; sea, slight; wire angle, 02°. 97.32

385	7.86	34.19	1.32	137
388	7.81	34.20	1.22	136
391	7.79	34.16	1.20	138
413	7.50	34.20	1.13	132
416	7.48	34.21	1.35	130
418	7.46	34.20	1.09	131
441	7.22	34.24	0.84	125
443	7.18	34.25	0.81	123
446	7.20	34.30	0.74	120
468	6.94	34.29	0.61	117
471	6.96	34.27	0.68	119
474	6.96	34.31	0.66	116
496	6.78	34.32	0.54	113
499	6.74	34.32	0.51	112
502	6.71	34.31	0.54	113
524	6.54	34.32	0.42	110
527	6.46	34.34	0.47	107
529	6.44	34.35	0.54	106

ORCA; August 28, 1959; 0000 GCT; 32°11.5'N, 117°16.5'W; sounding, 700 fm; wind, 290°, force 2; weather, partly cloudy; sea, slight; wire angle, 13°. 97.32

0	22.00	33.82	5.03	455	0	22.00	33.82	5.03	23.34	455	0.00
10	20.88	33.78	5.19	428	10	20.88	33.78	5.19	23.62	428	0.04
30	16.92	33.53	5.79	351	20	18.18	33.54	5.59	24.13	379	0.08
39	15.58	33.53	5.76	322	30	16.92	33.53	5.79	24.43	351	0.12
49	14.19	33.54	4.96	292	50	14.10	33.54	4.91	25.06	291	0.18
64	12.80	33.55	4.46	265	75	12.02	33.58	3.98	25.50	249	0.25
78	11.78	33.60	3.81	243	100	11.03	33.70	3.31	25.78	223	0.31
97	11.10	33.69	3.35	224	150	10.40	33.84	2.68	26.01	201	0.42
122	10.68	33.78	3.08	211	200	9.99	34.03	2.23	26.21	182	0.52
141	10.51	33.82	2.75	205	250	9.67	34.20	1.60	26.40	164	0.60
170	10.12	33.89	2.59	193	300	8.99	34.22	1.31	26.52	151	0.69
199	10.00	34.02	2.24	182	400	7.14	34.23	0.79	26.82	124	0.83
228	9.88	34.16	1.84	170	500	6.32	34.29	0.46	26.98	109	0.95
267	9.43	34.20	1.42	160							
326	8.62	34.23	1.27	145							
400	7.14	34.23	0.79	124							
474	6.48	34.28	0.51	112							
554	6.10	34.31	0.35	105							

ORCA; August 27, 1959; 1959 GCT; 32°00'N, 117°40'W; sounding, 378 fm; wind, 330°, force 2; weather, overcast; sea, moderate; wire angle, 18°. 97.40

1	21.01	33.73	5.39	435	0	(21.01)	(33.73)	(5.39)	(23.55)	(435)	(0.00)
10	20.22	33.72	5.49	416	10	20.22	33.72	5.49	23.75	416	0.04
30	14.72	33.57	5.67	302	20	18.33	33.68	5.60	24.20	372	0.08
39	14.34	33.58	5.35	293	30	14.72	33.57	5.67	24.95	302	0.12
49	12.81	33.60	4.10	262	50	12.70	33.60	4.07	25.39	260	0.17
63	11.50	33.58	4.01	240	75	10.95	33.67	3.71	25.78	223	0.23
77	10.76	33.68	3.62	220	100	10.28	33.72	3.31	25.93	208	0.29
95	10.34	33.71	3.35	210	150	9.72	33.89	2.84	26.16	187	0.39
119	10.02	33.78	3.26	200	200	9.24	34.02	2.33	26.33	170	0.48
137	9.86	33.86	2.96	192	250	9.21	34.21	1.52	26.49	155	0.56
165	9.58	33.91	2.78	183	300	8.82	34.24	1.19	26.57	147	0.64
192	9.34	34.00	2.42	173	400	7.47	34.26	0.80	26.79	127	0.78
219	9.06	34.06	2.10	164	500	6.59	34.29	0.46	26.94	112	0.91
256	9.26	34.25	1.39	153							
313	8.66	34.23	1.14	146							
383	7.68	34.26	0.88	130							
456	6.93	34.27	0.59	118							
535	6.38	34.31	0.39	108							

a) Test cast. Station 97.32 was also occupied on August 14 by R/V Hugh M. Smith. These data are presented out of order on page 345 so that they may be included with the other observations of this ship which collected samples for phosphate, nitrite, nitrate and silicate in addition to oxygen.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta^{-5}T_3$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta^{-5}T_3$ 10^{-5} cm/g	ΔD dyn. m

97.50 ORCA; August 27, 1959; 1352 GCT; 31°40'N, 118°23'W; sounding, 1300 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 02°.

1	19.20	33.66	5.36	395	0	(19.20)	(33.66)	(5.36)	(23.97)	(395)	(0.00)
11	19.22	33.67	5.36	394	10	19.21	33.66	5.36	23.97	395	0.04
31	17.08	33.48	5.71	358	20	19.11	33.66	5.37	23.99	393	0.08
41	15.31	33.44	5.75	323	30	17.30	33.50	5.68	24.31	362	0.12
56	14.40	33.45	5.57	304	50	14.68	33.44	5.64	24.86	310	0.18
71	13.80	33.51	5.27	287	75	13.20	33.52	5.02	25.23	275	0.26
95	11.44	33.53	4.38	242	100	11.12	33.54	4.27	25.64	236	0.32
116	10.32	33.58	4.13	220	150	9.24	33.71	3.52	26.09	193	0.43
136	9.80	33.62	3.73	208	200	8.61	34.01	2.28	26.43	161	0.52
156	9.00	33.77	3.43	185	250	7.89	34.07	1.84	26.58	146	0.60
186	8.74	33.96	2.48	167	300	7.54	34.16	1.43	26.70	135	0.67
221	8.38	34.06	2.08	154	400	6.68	34.24	0.75	26.88	118	0.80
250	7.89	34.07	1.84	146	500	6.17	34.31	0.45	27.01	106	0.92
300	7.54	34.16	1.43	135	600	5.53	34.38	0.31	27.14	94	1.03
355	6.96	34.20	1.01	124							
440	6.44	34.26	0.56	114							
524	6.07	34.34	0.41	103							
609	5.48	34.38	0.29	92							

97.60 ORCA; August 27, 1959; 0744 GCT; 31°18'N, 119°06'W; sounding, 2000+ fm; wind, 330°, force 4; weather, overcast; sea, moderate; wire angle, 03°.

2	19.86	33.86	5.11	397	0	(19.86)	(33.86)	(5.11)	(23.95)	(397)	(0.00)
12	19.89	33.87	5.16	397	10	19.89	33.87	5.14	23.95	397	0.04
37	13.83	33.49	5.36	290	20	19.84	33.87	5.17	23.96	396	0.08
47	12.92	33.53	4.99	269	30	15.80	33.59	5.33	24.74	322	0.12
62	11.77	33.62	4.01	241	50	12.60	33.56	4.66	25.38	261	0.17
77	10.84	33.67	3.63	222	75	10.95	33.66	3.66	25.76	224	0.23
101	9.42	33.80	2.89	189	100	9.47	33.79	2.92	26.12	190	0.29
121	9.11	33.92	2.49	176	150	8.68	34.04	2.02	26.44	160	0.38
141	8.78	34.00	2.14	164	200	8.41	34.18	1.51	26.59	146	0.45
171	8.50	34.14	1.72	150	250	7.62	34.16	1.30	26.69	136	0.52
201	8.40	34.18	1.50	146	300	7.15	34.18	1.08	26.77	128	0.59
241	7.70	34.16	1.32	137	400	6.58	34.27	0.48	26.92	114	0.72
271	7.48	34.16	1.28	134	500	5.87	34.33	0.33	27.07	100	0.83
320	6.90	34.19	0.89	124	600	5.32	34.35	0.29	27.14	93	0.93
385	6.66	34.25	0.57	116							
485	5.96	34.33	0.33	102							
575	5.44	34.34	0.29	95							
650	5.04	34.37	0.29	89							

97.70 ORCA; August 27, 1959; 0135 GCT; 30°56'N, 119°48'W; sounding, 2000+ fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 30°.

2	18.46	33.51	5.33	388	0	(18.46)	(33.51)	(5.33)	(24.04)	(388)	(0.00)
10	18.47	33.53	5.30	387	10	18.47	33.53	5.30	24.05	387	0.04
28	18.28	33.54	5.32	382	20	18.43	33.54	5.31	24.06	386	0.08
36	17.96	33.55	5.41	373	30	18.23	33.54	5.33	24.12	381	0.12
49	16.49	33.51	5.73	343	50	16.35	33.51	5.75	24.54	340	0.19
60	15.37	33.52	5.74	318	75	14.20	33.48	5.55	24.99	298	0.27
80	13.74	33.46	5.45	290	100	11.23	33.50	4.35	25.59	241	0.34
96	11.71	33.49	4.54	250	150	9.08	33.79	3.62	26.18	185	0.44
111	10.42	33.55	4.05	223	200	8.13	33.95	2.93	26.46	158	0.53
126	9.98	33.63	3.70	210	250	7.53	34.05	1.98	26.52	143	0.61
148	9.10	33.79	3.64	185	300	7.01	34.09	1.53	26.72	133	0.68
176	8.78	33.88	3.08	173	400	6.32	34.22	0.77	26.92	114	0.81
198	8.18	33.95	2.95	159	500	5.94	34.33	0.34	27.05	102	0.92
236	7.76	34.04	2.15	146							
279	7.22	34.07	1.72	138							
347	6.62	34.15	1.09	124							
421	6.24	34.25	0.69	112							
501	5.93	34.33	0.33	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; August 26, 1959; 1933 GCT; 30°35'N, 120°30'W; sounding, 2000+ fm; wind, 330°, force 4; weather, overcast; sea, moderate; wire angle, 15°.											97.80
1	18.94	33.44	5.14	405	0	(18.94)	(33.44)	(5.14)	(23.86)	(405)	(0.00)
11	18.94	33.42	5.17	406	10	18.94	33.42	5.17	23.85	406	0.04
30	17.74	33.39	5.54	380	20	18.91	33.42	5.18	23.86	405	0.08
41	16.72	33.35	5.72	360	30	17.74	33.39	5.54	24.12	380	0.12
54	15.52	33.32	5.72	336	50	15.71	33.31	5.72	24.54	341	0.19
68	14.90	33.33	5.74	323	75	14.32	33.33	5.62	24.86	310	0.27
92	14.09	33.44	5.45	298	100	13.11	33.41	5.24	25.16	282	0.35
111	12.38	33.41	5.08	268	150	9.80	33.59	4.37	25.91	210	0.47
130	11.22	33.60	5.03	233	200	8.43	33.91	2.97	26.38	166	0.57
150	9.80	33.59	4.37	210	250	7.73	34.02	2.15	26.56	148	0.65
178	8.88	33.80	3.56	180	300	7.00	34.09	1.53	26.72	133	0.72
211	8.25	33.95	2.75	160	400	6.69	34.21	0.78	26.86	120	0.85
240	7.88	34.00	2.31	152	500	5.90	34.23	0.47	26.98	109	0.98
287	7.14	34.07	1.67	136	600	(5.43)	(34.33)		(27.11)	(96)	(1.08)
340	6.76	34.13	1.25	126							
421	6.66	34.23	0.62	118							
504	5.87	34.23	0.46	108							
588	5.46	34.31	0.32	98							
ORCA; August 26, 1959; 1252 GCT; 30°16'N, 121°11'W; sounding, 2000+ fm; wind, 310°, force 3; weather, overcast; sea, slight; wire angle, 09°.											97.90
1	19.19	33.36	-	416	0	(19.19)	(33.36)		(23.74)	(416)	(0.00)
11	19.24	33.37	5.16	417	10	19.24	33.37		23.73	417	0.04
31	19.60	33.77	5.22	397	20	19.72	33.56	5.16	23.77	414	0.08
40	17.65	33.46	5.44	373	30	19.61	33.76	5.21	23.94	398	0.12
55	16.81	33.44	5.52	356	50	17.00	33.44	5.52	24.34	359	0.20
70	15.83	33.44	5.72	334	75	15.63	33.46	5.72	24.67	328	0.29
94	14.86	33.60	5.57	302	100	14.64	33.61	5.54	25.00	297	0.37
114	13.94	33.61	5.36	282	150	10.88	33.63	4.60	25.74	226	0.50
133	12.09	33.68	4.95	242	200	8.87	33.85	3.48	26.26	177	0.60
153	10.70	33.62	4.54	223	250	8.15	33.97	3.03	26.46	158	0.69
183	9.26	33.73	4.00	192	300	7.43	34.06	1.92	26.64	141	0.76
217	8.60	33.87	3.26	171	400	6.46	34.14	1.06	26.84	122	0.90
247	8.21	33.96	3.08	159	500	5.80	34.24	0.56	27.00	107	1.02
296	7.48	34.05	2.01	142	600	5.31	34.32	0.40	27.12	95	1.13
350	6.90	34.09	1.43	132							
434	6.20	34.18	0.86	116							
518	5.73	34.25	0.48	105							
602	5.30	34.32	0.40	95							
ORCA; August 26, 1959; 1352 GCT;[a] 30°16'N, 121°11'W; sounding, 2000+ fm; wind, 310°, force 3; weather, overcast; sea, slight; wire angle, 04°.											97.90
1	19.24	33.40	5.41	415	0	(19.24)	(33.40)	(5.41)	(23.76)	(415)	(0.00)
11	19.29	33.40	5.66	416	10	19.29	33.40	5.66	23.75	416	0.04
21	19.78	33.84	5.36	396	20	19.77	33.80	5.40	23.93	399	0.08
26	19.68	33.80	5.41	397	30	19.17	33.73	5.46	24.03	389	0.12
31	19.04	33.72	5.47	387	50	16.96	33.48	5.87	24.38	356	0.20
36	17.76	33.48	5.78	374	75	15.31	33.44	6.16	24.73	323	0.28
41	17.47	33.46	5.74	369	100	14.71	33.58	5.74	24.96	301	0.36
46	17.31	33.48	5.88	364	150	10.88	33.62	4.63	25.74	226	0.49
51	16.88	33.48	5.87	354	200	8.96	33.84	3.66	26.24	179	0.60
61	16.17	33.45	5.81	340							
71	15.44	33.41	6.02	328							
76	15.30	33.45	6.17	322							
81	15.35	33.58	5.97	314							
86	15.30	33.63	5.84	309							
91	15.26	33.69	5.72	304							
96	14.80	33.58	5.74	302							
150	10.88	33.62	4.63	226							
200	8.96	33.84	3.66	179							

a) Test cast.

SIO
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5908

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm³/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm³/g	ΔD dyn. m
$99^{7.28^9}$ D	ORCA; August 28, 1959; 0705 GCT;[a] 31°46.5'N, 116°44.5'W; sounding, 108 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 05°.										
1	19.75	33.66	5.60	408	0	(19.75)	(33.66)	(5.60)	(23.83)	(408)	(0.00)
11	19.58	33.62	5.67	407	10	19.59	33.62	5.67	23.84	407	0.04
21	18.25	33.59	5.61	378	20	18.29	33.59	5.62	24.15	378	0.08
31	15.64	33.60	3.61	318	30	15.95	33.60	3.73	24.70	325	0.12
41	14.07	33.56	3.92	289	50	13.62	33.55	3.85	25.17	281	0.18
50	13.62	33.55	3.85	281	75	12.23	33.60	3.37	25.48	251	0.24
60	12.94	33.58	3.64	265	100	11.72	33.65	3.04	25.62	238	0.30
70	12.46	33.58	3.49	257							
80	12.06	33.62	3.26	246							
90	11.85	33.64	3.43u	241							
100	11.72	33.65	3.04	238							
109	11.44	33.68	2.96	231							
119	11.28	33.69	2.92	228							
129	10.98	33.71	2.75	221							
138	10.76	33.76	2.68	213							
$99^{8.28^7}$ C	ORCA; August 28, 1959; 0602 GCT;[a] 31°45'N, 116°42.5'W; sounding, 25 fm; wind, 320°, force 1; weather, overcast; sea, smooth; wire angle, 00°.										
1	20.50	33.67	5.51	426	0	(20.50)	(33.67)	(5.51)	(23.64)	(426)	(0.00)
11	19.64	33.64	5.70	408	10	19.65	33.64	5.69	23.83	408	0.04
21	19.26	33.63	5.70	399	20	19.60	33.64	5.70	23.85	406	0.08
31	16.18	33.58	4.65	331	30	16.48	33.58	4.80	24.57	338	0.12
41	14.78	33.60	3.49	300							
100.28^8 A	ORCA; August 28, 1959; 1454 GCT;[a] 31°42.5'N, 116°41.5'W; sounding, 20 fm; wind, calm; weather, overcast; sea, smooth; wire angle, 00°.										
0	19.03	33.58	5.29	397	0	19.03	33.58	5.29	23.95	397	0.00
10	17.11	33.58	5.40	352	10	17.11	33.58	5.40	24.42	352	0.04
20	15.82	33.54	5.12	327	20	15.82	33.54	5.12	24.68	327	0.07
30	14.47	33.53	4.86	299	30	14.47	33.53	4.86	24.97	299	0.10
100.29 B	ORCA; August 28, 1959; 0907 GCT;[a] 31°42'N, 116°43.5'W; sounding, 108 fm; wind, 320°, force 1; weather, overcast; sea, slight; wire angle, 05°.										
0	18.82	33.63	5.47	388	0	18.82	33.63	5.47	24.03	388	0.00
10	16.54	33.58	5.84	339	10	16.54	33.58	5.84	24.56	339	0.04
20	15.24	33.55	5.56	314	20	15.24	33.55	5.56	24.82	314	0.07
30	14.12	33.54	4.88	291	30	14.12	33.54	4.88	25.06	291	0.10
40	13.53	33.60	3.70	275	50	12.74	33.58	4.08	25.37	262	0.15
50	12.74	33.58	4.08	262	75	11.82	33.62	3.80	25.57	243	0.22
60	12.52	33.58	3.90	258	100	10.84	33.75	2.91	25.84	216	0.28
70	12.10	33.59	3.98	249	150	10.12	33.88	2.45	26.08	194	0.38
80	11.60	33.64	3.57	237							
90	11.30	33.71	3.18	226							
100	10.84	33.75	2.91	216							
110	10.62	33.78	2.74	210							
119	10.41	33.84	2.66	202							
129	10.24	33.86	2.55	198							
139	10.16	33.89	2.55	194							
149	10.12	33.88	2.45	194							
159	10.12	33.94	2.42	189							
169	9.98	33.96	2.28	186							

a) Special cast for biological work, Stations A through D.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

ORCA; August 28, 1959; 1044 GCT; 31°40.5'N, 116°46.5'W; sounding, 200 fm; wind, 330°, force 1; weather, overcast; sea, smooth; wire angle, 12°. 100.30

1	19.96	33.61	5.55	417	0	(19.96)	(33.61)	(5.55)	(23.74)	(417)	(0.00)
11	19.48	33.63	5.65	404	10	19.51	33.63	5.64	23.86	405	0.04
31	14.32	33.53	4.95	296	20	16.80	33.56	5.33	23.47	347	0.08
51	13.22	33.51	4.70	276	30	14.34	33.53	4.96	25.00	296	0.11
76	12.28	33.55	4.21	256	50	13.24	33.51	4.71	25.21	277	0.17
100	11.78	33.58	3.79	244	75	12.32	33.55	4.22	25.42	256	0.23
125	11.14	33.72	3.11	223	100	11.78	33.58	3.79	25.55	244	0.30
159	10.14	33.86	2.53	196	150	10.39	33.82	2.66	25.99	203	0.41
198	9.98	34.04	2.06	180	200	9.97	34.03	2.05	26.24	179	0.51
247	9.29	34.14	1.71	162	250	9.23	34.14	1.68	26.43	161	0.60
296	8.58	34.19	1.16	147	300	8.52	34.19	1.14	26.58	146	0.68
345	7.92	34.22	1.11	136							

ORCA; August 28, 1959; 2130 GCT; 31°19.5'N, 117°23'W; sounding, 1000 fm; wind, 280°, force 4; weather, overcast; sea, moderate; wire angle, 22°. 100.40

1	20.36	33.71	4.99	420	0	(20.36)	(33.71)	(4.99)	(23.70)	(420)	(0.00)
10	20.34	33.73	5.08	418	10	20.34	33.73	5.08	23.72	418	0.04
29	19.13	33.63	5.15	395	20	20.32	33.73	5.09	23.73	418	0.08
38	16.54	33.46	5.57	348	30	19.00	33.62	5.16	23.99	393	0.12
52	15.30	33.54	5.50	316	50	15.42	33.53	5.52	24.77	318	0.20
66	14.54	33.51	5.46	302	75	13.39	33.49	4.96	25.17	281	0.27
89	12.59	33.49	4.59	266	100	11.40	33.53	4.15	25.58	241	0.34
108	11.24	33.56	4.10	236	150	9.54	33.72	3.47	26.06	196	0.45
125	10.70	33.58	4.09	226	200	8.58	33.92	2.62	26.36	168	0.54
144	9.76	33.69	3.60	202	250	7.96	34.07	2.03	26.57	147	0.62
171	9.02	33.83	3.12	181	300	7.20	34.09	1.60	26.70	136	0.70
203	8.54	33.92	2.58	167	400	6.38	34.21	0.86	26.90	116	0.83
230	8.32	34.04	2.23	155	500	6.00	34.32	0.49	27.04	103	0.94
276	7.42	34.08	1.77	140							
327	7.06	34.13	1.34	131							
406	6.32	34.21	0.83	115							
486	6.03	34.32	0.51	104							
569	5.86	34.36	0.31	98							

ORCA; August 29, 1959; 0324 GCT; 31°02'N, 118°07'W; sounding, 950 fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 16°. 100.50

1	19.80	33.64	5.09	411	0	(19.80)	(33.64)	(5.09)	(23.80)	(411)	(0.00)
10	19.82	33.58	5.08	416	10	19.82	33.58	5.08	23.75	416	0.04
30	18.21	33.50	5.38	383	20	19.82	33.58	5.08	23.75	416	0.08
39	16.28	33.37	5.71	349	30	18.21	33.50	5.38	24.10	383	0.12
54	14.98	33.36	5.79	322	50	15.28	33.36	5.78	24.67	328	0.19
68	14.58	33.46	5.60	306	75	14.22	33.47	5.47	24.98	298	0.27
92	12.97	33.48	5.03	273	100	12.39	33.48	4.90	25.36	263	0.34
111	11.56	33.48	4.69	248	150	9.28	33.72	3.66	26.10	192	0.46
130	9.86	33.58	4.16	212	200	8.33	33.95	2.56	26.43	161	0.55
150	9.28	33.72	3.66	192	250	7.70	34.04	2.02	26.58	146	0.63
178	8.76	33.86	3.10	175	300	7.24	34.11	1.44	26.71	134	0.70
212	8.12	33.99	2.31	156	400	6.41	34.18	0.76	26.87	119	0.83
240	7.80	34.02	2.10	149	500	5.77	34.27	0.39	27.03	104	0.95
288	7.36	34.10	1.58	137	600	(5.22)	(34.35)	(0.29)	(27.15)	(92)	(1.05)
340	6.90	34.14	1.13	128							
422	6.27	34.20	0.64	115							
505	5.74	34.28	0.37	103							
590	5.27	34.34	0.29	93							

100.60 ORCA; August 29, 1959; 0902 GCT; 30°40'N, 118°47'W; sounding, 2000+ fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 08°.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
1	18.69	33.58	5.08	388	0	(18.69)	(33.58)	(5.08)	(24.04)	(388)	(0.00)
11	18.74	33.58	5.17	390	10	18.73	33.58	5.17	24.02	390	0.04
31	17.66	33.44	5.48	374	20	18.74	33.58	5.17	24.02	390	0.08
41	15.87	33.32	5.84	343	30	17.86	33.46	5.42	24.15	378	0.12
56	14.82	33.48	5.70	310	50	15.12	33.43	5.76	24.76	320	0.19
71	14.23	33.46	5.53	300	75	14.00	33.46	5.44	25.03	294	0.26
95	12.64	33.55	4.82	262	100	12.01	33.56	4.64	25.49	250	0.33
115	11.24	33.58	4.49	235	150	9.60	33.69	3.71	26.02	200	0.45
135	10.24	33.58	4.23	218	200	8.73	33.96	2.65	26.37	167	0.54
154	9.46	33.71	3.56	196	250	7.89	34.05	2.13	26.58	147	0.62
183	8.98	33.89	2.92	176	300	7.32	34.09	1.59	26.68	137	0.70
218	8.46	34.00	2.41	160	400	6.64	34.22	0.76	26.87	119	0.83
248	7.92	34.05	2.14	148	500	5.87	34.26	0.42	27.01	106	0.95
298	7.34	34.09	1.60	138	600	5.38	34.34	0.34	27.13	94	1.05
353	7.08	34.22	0.98	124							
437	6.29	34.22	0.60	114							
522	5.74	34.28	0.38	103							
607	5.36	34.34	0.33	94							

100.60 ORCA; August 29, 1959; 1018 GCT;[a] 30°40'N, 118°47'W; sounding, 2000+ fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 01°.

1	18.71	33.58	5.31	389	0	(18.71)	(33.58)	(5.31)	(24.03)	(389)	(0.00)
11	18.74	33.58	5.27	390	10	18.74	33.58	5.27	24.02	390	0.04
31	17.72	33.42	5.52	370	20	18.74	33.58	5.27	24.02	390	0.08
36	16.28	33.24	5.83	358	30	17.82	33.53	5.50	24.21	372	0.12
41	15.76	33.24	5.85	347	50	14.91	33.35	5.85	24.74	322	0.19
46	15.43	33.29	5.83	336	75	13.84	33.53	5.34	25.10	287	0.26
51	14.88	33.35	5.85	321	100	11.87	33.53	4.42	25.49	250	0.33
56	14.86	33.44	5.66	314	150	9.45	33.70	3.48	26.05	197	0.44
61	14.49	33.44	5.51	306	200	8.72	33.93	2.59	26.34	169	0.53
66	14.26	33.44	5.43	302							
71	14.10	33.48	5.45	295							
76	13.78	33.53	5.31	286							
80	13.42	33.54	5.11	278							
85	13.14	33.50	5.03	276							
90	12.72	33.54	4.86	264							
95	12.32	33.51	4.65	260							
150	9.45	33.70	3.48	197							
200	8.72	33.93	2.59	169							

100.70 ORCA; August 29, 1959; 1532 GCT; 30°21.5'N, 119°26'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 11°.

1	18.84	33.39	5.18	406	0	(18.84)	(33.39)	(5.18)	(23.85)	(406)	(0.00)
11	18.86	33.40	5.17	406	10	18.86	33.40	5.17	23.85	406	0.04
30	18.39	33.55	5.32	384	20	18.86	33.40	5.17	23.85	406	0.08
41	17.12	33.37	5.62	368	30	18.39	33.55	5.32	24.08	384	0.12
55	16.06	33.39	5.61	342	50	16.38	33.37	5.62	24.43	351	0.19
70	15.30	33.56	5.54	314	75	15.08	33.57	5.51	24.87	309	0.28
94	14.22	33.58	5.34	290	100	13.80	33.58	5.25	25.15	282	0.35
113	12.26	33.55	4.98	255	150	9.63	33.60	4.20	25.94	207	0.47
134	10.68	33.54	4.55	228	200	8.61	33.84	3.32	26.29	174	0.57
153	9.47	33.62	4.10	203	250	7.92	34.03	2.06	26.54	149	0.66
182	8.91	33.74	3.69	186	300	7.67	34.14	1.40	26.67	138	0.73
216	8.34	33.91	2.90	164	400	6.94	34.26	0.77	26.86	120	0.86
246	7.95	34.02	2.18	151	500	6.16	34.29	0.48	27.00	107	0.98
295	7.70	34.13	1.47	139	600	5.53	34.30	0.30	27.08	99	1.09
349	7.30	34.22	1.03	127							
433	6.70	34.27	0.65	116							
518	6.02	34.29	0.44	106							
603	5.52	34.30	0.29	99							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	ΔD dyn. m

100.80

ORCA; August 29, 1959; 2104 GCT; 30°02'N, 120°04'W; sounding, 2000 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 12°.

1	19.18	33.35	5.12	417	0	(19.18)	(33.35)	(5.12)	(23.74)	(417)	(0.00)
11	19.16	33.39	5.17	414	10	19.16	33.39	5.17	23.77	414	0.04
30	17.89	33.42	5.48	381	20	19.15	33.39	5.18	23.78	413	0.08
40	16.77	33.30	5.67	364	30	17.89	33.42	5.48	24.11	381	0.12
55	15.84	33.39	5.71	338	50	16.15	33.36	5.69	24.48	346	0.20
69	15.06	33.38	5.76	322	75	15.00	33.40	5.76	24.76	320	0.28
94	14.18	33.45	5.40	299	100	13.89	33.46	5.31	25.05	292	0.36
113	13.02	33.49	5.12	274	150	10.70	33.65	4.46	25.80	221	0.48
132	11.68	33.62	4.68	240	200	8.93	33.78	3.46	26.19	184	0.59
151	10.66	33.65	4.45	220	250	8.20	33.91	2.58	26.41	163	0.68
180	9.22	33.70	3.74	194	300	7.43	34.03	1.91	26.62	143	0.76
214	8.78	33.82	3.27	178	400	6.48	34.16	0.98	26.85	121	0.89
243	8.32	33.89	2.69	166	500	5.85	34.26	0.47	27.01	106	1.01
290	7.58	34.02	2.06	146	600	(5.32)	(34.34)	(0.36)	(27.14)	(93)	(1.12)
343	6.91	34.07	1.41	133							
426	6.30	34.20	0.81	116							
509	5.80	34.27	0.44	104							
593	5.37	34.34	0.36	94							

100.90

ORCA; August 30, 1959; 0235, 0441 GCT; 29°43'N, 120°43'W; sounding, 2000+ fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 18°, 18°.

1	19.56	33.53	5.12	413	0	(19.56)	(33.53)	(5.12)	(23.78)	(413)	(0.00)
10	19.58	33.54	5.06	413	10	19.58	33.54	5.06	23.78	413	0.04
29	19.80	33.69	5.04	408	20	19.66	33.59	5.04	23.80	411	0.08
39	19.33	33.93	5.31	379	30	19.83	33.70	5.05	23.84	408	0.12
53	17.44	33.70	5.53	351	50	17.69	33.71	5.47	24.38	355	0.20
67	16.62	33.57	5.65	342	75	16.31	33.55	5.64	24.59	336	0.29
90	16.15	33.70	5.54	322	100	16.59	33.90	5.54	24.79	316	0.37
109	15.24	33.75	5.55	299	150	11.47	33.55	4.74	24.59	241	0.51
129	13.42	33.60	5.19	273	200	9.35	33.74	3.94	26.09	193	0.62
147	11.74	33.55	4.80	246	250	8.39	33.92	2.90	26.40	164	0.71
176	10.14	33.67	4.37	210	300	7.65	34.03	2.18	26.58	146	0.79
208	9.15	33.77	3.78	187	400	6.60	34.14	1.14	26.82	124	0.93
236	8.60	33.87	3.18	171	500	5.99	34.25	0.55	26.98	108	1.05
282	7.94	34.01	2.38	152	600	5.47	34.33	0.34	27.11	96	1.16
334	7.16	34.06	1.83	137	700	5.03	34.42	0.30	27.23	85	1.26
415	6.45	34.15	0.98	121	800	4.62	34.46	0.37	27.31	77	1.35
497	5.97	34.23	0.57	109	1000	4.00	34.49	0.53	27.40	69	1.51
581	5.48	34.29	0.34	99	1200	3.50	34.58	0.76	27.52	57	1.66
					1500	2.82	34.60	1.16	27.60	50	1.85
378a)	6.80	34.13	1.34	127	2000	2.11	34.62	1.80	27.68	42	2.12
473	6.20	34.25	0.68	111	2500	1.80	34.63	2.24			
569	5.68	34.33	0.38	98	3000	1.67	34.66	2.52			
664	5.21	34.39	0.31	89							
758	4.78	34.45	0.33	80							
948	4.16	34.47	0.49	72							
1139	3.67	34.55	0.69	61							
1329	3.18	34.60	0.91	52							
1520	2.79	34.60	1.18	49							
1701	2.46	34.63	1.44	44							
1902	2.21	34.62	1.68	43							
2095	2.03	34.63	1.91	41							
2288	1.92	34.63	2.17	40							
2483	1.81	34.63	2.22	39							
2680	1.73	34.65	2.46	37							
2880	1.69	34.63	2.50	38							
2981	1.67	34.67	2.51	35							
3081	1.66	34.65	2.53	36							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

103.30 BLACK DOUGLAS; August 25, 1959; 2345 GCT; 31°05'N, 116°25'W; sounding, 40 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 01°.

1	21.83	33.74	5.44	456	0	(21.83)	(33.74)	(5.44)	(23.33)	(456)	(0.00)
10	20.98	33.69	5.54	437	10	20.98	33.69	5.54	23.53	437	0.04
27	16.61	33.57	5.15	342	20	18.40	33.63	5.42	23.89	402	0.09
36	15.18	33.58	5.07	310	30	16.16	33.57	5.11	24.64	332	0.12

103.35 BLACK DOUGLAS; August 25, 1959; 2144 GCT; 30°56'N, 116°45'W; sounding, 740 fm; wind, 260°, force 3; weather, overcast; sea, moderate; wire angle, 18°.

2	22.47	33.82	4.75	467	0	(22.47)	(33.82)	(4.75)	(23.21)	(467)	(0.00)
10	22.30	33.83	4.69	462	10	22.30	33.83	4.69	23.26	462	0.05
27a)	19.29	33.63	5.30	400	20	22.00	33.82	4.69	23.34	455	0.09
36a)	17.86	33.57	5.38	370	30	18.70	33.60	5.34	24.04	388	0.13
49	16.80	33.56	5.52	347	50	16.50	33.56	5.56	24.54	340	0.21
61	15.51	33.55	5.64	319	75	14.30	33.55	5.08	25.03	294	0.29
82	13.74	33.55	4.81	283	100	11.85	33.56	3.92	25.53	247	0.36
99	11.97	33.56	3.95	249	150	10.04	33.74	3.36	25.98	204	0.47
116	10.91	33.64	3.71	225	200	9.25	33.98	2.50	26.30	173	0.56
132	10.49	33.68	3.52	215	250	8.50	34.08	2.08	26.50	154	0.65
157	9.88	33.78	3.21	198	300	7.72	34.14	1.59	26.66	139	0.72
187	9.37	33.95	2.57	177	400	7.31	34.30	0.61	26.85	121	0.86
212	9.12	33.99	2.45	170	500	6.40	34.27	0.67	26.95	112	0.98
254	8.44	34.10	2.01	152							
300	7.72	34.14	1.59	139							
371	7.50	34.29	0.76	125							
445	6.95	34.29	0.53	117							
518	6.22	34.27	0.78	110							

103.40 BLACK DOUGLAS; August 25, 1959; 1746 GCT; 30°34'N, 117°11'W; sounding, 800 fm; wind, 260°, force 3; weather, cloudy; sea, slight; wire angle, 05°.

2	20.91	33.69	4.84	436	0	(20.91)	(33.69)	(4.84)	(23.54)	(436)	(0.00)
11	20.54	33.68	4.92	427	10	20.64	33.68	4.92	23.61	429	0.04
29	18.46	33.58	5.36	383	20	20.33	33.68	4.96	23.68	422	0.09
38	17.36	33.53	5.46	361	30	18.30	33.57	5.37	24.12	380	0.13
51	16.63	33.53	5.60	345	50	16.70	33.53	5.60	24.48	347	0.20
64	15.94	33.55	5.38	328	75	15.13	33.57	5.33	24.86	310	0.28
86	14.46	33.58	5.30	295	100	13.32	33.53	5.13	25.21	277	0.36
104	12.93	33.49	5.05	272	150	9.93	33.58	4.08	25.87	214	0.48
121	11.59	33.48	4.58	248	200	8.70	33.85	3.08	26.29	174	0.58
139	10.64	33.51	4.30	230	250	8.02	34.02	2.13	26.52	152	0.66
164	9.30	33.68	3.71	196	300	7.45	34.08	1.64	26.65	140	0.74
195	8.78	33.82	3.12	178	400	6.57	34.20	0.82	26.88	118	0.87
221	8.39	33.95	2.65	162	500	6.32	34.31	0.44	26.99	108	0.99
263	7.88	34.04	1.97	148							
312	7.32	34.09	1.56	137							
385	6.60	34.18	0.91	121							
460	6.56	34.32	0.41	110							
536	6.07	34.29	0.53	106							

a) Nansen bottles at 27 and 36 meters appear to have been reversed; they are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{3}^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3}^{-5} 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; August 25, 1959; 1505 GCT;[a] 30°28'N, 117°29'W; sounding, 1000 fm; wind, 270°, force 1; weather, overcast; sea, slight; wire angle, 00°. 103.45

0	20.62	33.66	4.92	430	0	20.62	33.66	4.92	23.60	430	0.00
9	20.36	33.68	5.08	423	10	20.34	33.68	5.09	23.68	422	0.04
27	18.22	33.51	5.35	383	20	19.75	33.64	5.20	23.81	410	0.08
31	17.70	33.49	5.43	372	30	17.79	33.49	5.40	24.19	374	0.12
36	17.50	33.51	5.51	366	50	16.70	33.50	5.43	24.45	349	0.20
41	17.26	33.53	5.40	359	75	15.25	33.56	5.45	24.83	313	0.28
45b)	16.90	33.51	5.42	352	100	13.02	33.56	5.07	25.30	269	0.35
50b)	16.70	33.50	5.43	349	150	9.79	33.66	3.93	25.96	205	0.47
54	16.46	33.51	5.43	343							
58	16.24	33.50	5.45	339							
63	-	33.49	5.46								
68	-	33.48	5.49								
72	15.54	33.51	5.41	323							
76	15.09	33.57	5.47	309							
81	14.66	33.56	5.39	301							
85	14.17	33.56	5.32	291							
134	10.38	33.60	4.22	219							
179	8.99	33.80	3.36	182							

BLACK DOUGLAS; August 25, 1959; 1223 GCT; 30°22'N, 117°44'W; sounding, 1000 fm; wind, 260°, force 2; weather, clear; sea, moderate; wire angle, 05°. 103.50

2	20.54	33.65	4.97	429	0	(20.54)	(33.65)	(4.97)	(23.61)	(429)	(0.00)
11	20.54	33.66	5.04	428	10	20.54	33.66	5.04	23.62	428	0.04
29	18.56	33.55	5.32	387	20	20.03	33.64	5.20	23.74	417	0.08
38	17.74	33.53	5.40	370	30	18.40	33.54	5.35	24.08	384	0.12
51	16.47	33.53	5.49	342	50	16.56	33.53	5.47	24.51	343	0.20
64	15.28	33.54	5.52	315	75	14.52	33.54	5.42	24.98	299	0.28
86	13.66	33.54	5.23	282	100	12.56	33.52	4.94	25.36	263	0.35
104	12.28	33.54	4.84	257	150	10.05	33.76	3.63	26.00	202	0.47
122	11.10	33.59	4.49	232	200	9.34	34.02	2.40	26.32	172	0.56
139	10.23	33.66	4.01	212	250	9.07	34.19	1.61	26.49	155	0.64
166	9.81	33.87	3.02	190	300	8.84	34.31	0.99	26.62	142	0.72
197	9.36	34.00	2.51	173	400	6.74	34.14	1.05	26.80	126	0.86
223	9.28	34.11	1.93	164	500	6.15	34.23	0.65	26.95	112	0.99
268	8.94	34.23	1.40	150							
317	8.78	34.34	0.81	139							
391	6.81	34.14	1.07	127							
467	6.36	34.22	0.68	115							
543	5.92	34.23	0.65	109							

BLACK DOUGLAS; August 24, 1959; 0713 GCT; 30°06'N, 118°23.5'W; sounding, 1940 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 10°. 103.60

2	20.12	33.62	4.82	421	0	(20.12)	(33.62)	(4.82)	(23.69)	(421)	(0.00)
11	20.08	33.62	4.80	420	10	20.10	33.62	4.80	23.70	420	0.04
28	18.46	33.58	5.06	383	20	19.87	33.62	4.81	23.76	415	0.08
37	17.94	33.57	5.20	372	30	18.30	33.58	5.09	24.12	380	0.12
50	17.27	33.57	5.24	356	50	17.27	33.57	5.24	24.37	356	0.20
64	16.50	33.51	5.35	344	75	15.97	33.54	5.35	24.66	329	0.28
86	15.34	33.57	5.34	314	100	14.50	33.55	5.28	24.99	298	0.36
103	14.31	33.55	5.25	294	150	10.79	33.59	4.26	25.74	226	0.50
121	12.66	33.53	4.69	264	200	8.99	33.92	2.84	26.29	174	0.60
138	11.30	33.51	4.47	241	250	8.24	34.06	2.27	26.53	152	0.68
165	10.16	33.71	3.97	207	300	7.65	34.13	1.62	26.66	139	0.76
195	9.08	33.90	2.94	177	400	6.58	34.22	0.81	26.89	117	0.89
222	8.76	33.99	2.57	164	500	6.03	34.29	0.54	27.01	106	1.01
266	7.94	34.10	2.03	145							
314	7.52	34.14	1.49	136							
388	6.70	34.21	0.91	120							
463	6.17	34.27	0.55	109							
539	5.95	34.30	0.53	104							

a) Test cast.
b) Nansen bottles at 45 and 50 meters appear to have been reversed; they are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
103.70	BLACK DOUGLAS; August 25, 1959; 0154 GCT; 29°49'N, 119°05'W; sounding, 1800 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 12°.										
2	19.96	33.59	4.94	418	0	(19.96)	(33.59)	(4.94)	(23.72)	(418)	(0.00)
10	19.92	33.65	5.02	413	10	19.92	33.65	5.02	23.78	413	0.04
28	19.32	33.67	5.17	398	20	19.83	33.66	5.06	23.80	411	0.08
37	18.88	33.84	5.15	374	30	19.25	33.74	5.15	24.02	390	0.12
50	18.10	33.78	5.33	360	50	18.10	33.78	5.33	24.33	360	0.20
63	17.02	33.64	5.47	346	75	16.70	33.65	5.51	24.57	338	0.28
85	16.26	33.67	5.53	326	100	15.47	33.57	5.54	24.78	317	0.37
102	15.34	33.55	5.54	316	150	11.13	33.52	4.48	25.62	238	0.51
119	13.90	33.55	5.22	286	200	9.00	33.88	3.07	26.26	177	0.61
137	12.36	33.53	4.72	259	250	8.39	34.04	2.17	26.48	156	0.70
161	10.18	33.57	4.23	218	300	7.57	34.05	1.89	26.61	144	0.78
191	9.18	33.82	3.36	184	400	7.50	34.29	0.81	26.81	124	0.92
217	8.76	33.96	2.59	167	500	6.61	34.36	0.34	26.99	108	1.04
260	8.26	34.05	2.08	153							
308	7.50	34.06	1.84	142							
381	7.58	34.25	0.91	128							
455	7.16	34.37	0.52	114							
531	6.14	34.32	0.25	105							
103.80	BLACK DOUGLAS; August 24, 1959; 2105 GCT; 29°27'N, 119°43.5'W; sounding, 1960 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 02°.										
2	19.83	33.67	5.03	410	0	(19.83)	(33.67)	(5.03)	(23.81)	(410)	(0.00)
11	19.69	33.66	5.18	407	10	19.69	33.66	5.18	23.84	407	0.04
29	19.32	33.62	5.34	401	20	19.70	33.66	5.18	23.84	407	0.08
38	18.12	33.60	5.48	374	30	19.24	33.62	5.37	23.92	399	0.12
51	16.86	33.51	5.39	352	50	16.93	33.52	5.39	24.40	354	0.20
64	16.28a)	33.50	5.61	340	75	16.07	33.59	5.65	24.67	328	0.28
87	15.38	33.60	5.65	313	100	15.08	33.64	5.59	24.93	304	0.36
104	14.70	33.68	5.51	293	150	10.98	33.58	4.67	25.70	230	0.50
121	13.48	33.66	5.42	270	200	9.02	33.86	3.18	26.24	179	0.60
140	11.81	33.58	4.91	245	250	8.28	34.08	2.06	26.54	151	0.69
165	9.91	33.64	4.17	208	300	7.82	34.18	1.53	26.68	137	0.76
197	9.10	33.85	3.21	180	400	6.94	34.28	0.88	26.88	118	0.90
222	8.52	33.95	2.73	164	500	6.17	34.30	0.63	27.01	106	1.01
266	8.12	34.14	1.78	144							
315	7.69	34.19	1.45	135							
389	7.02	-	0.94								
465	6.43	34.31	0.61	109							
540	5.88	34.30	0.67	103							
103.90	BLACK DOUGLAS; August 24, 1959; 1657 GCT; 29°14'N, 120°20'W; sounding, 2000 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 04°.										
2	19.62	33.68	5.07	404	0	(19.62)	(33.68)	(5.07)	(23.87)	(404)	(0.00)
11	19.61	33.67	5.14	404	10	19.61	33.67	5.14	23.87	404	0.04
29	19.50	33.84	5.23	389	20	19.57	33.68	5.18	23.88	403	0.08
38	19.03	33.84	5.26	378	30	19.46	33.84	5.23	24.04	388	0.12
51	18.13	33.75	5.37	363	50	18.24	33.76	5.35	24.28	365	0.20
64	17.30	33.69	5.36	348	75	16.83	33.68	5.42	24.57	338	0.28
86	16.44	33.71	5.44	328	100	16.09	33.79	5.40	24.82	314	0.37
104	15.69	33.81	5.34	304	150	11.20	33.64	4.63	25.70	230	0.50
121	14.47	33.82	5.20	278	200	8.93	33.81	3.42	26.22	181	0.61
139	12.26	33.64	4.80	249	250	8.22	34.02	2.56	26.49	155	0.70
165	10.17	33.68	4.32	210	300	7.56	34.06	1.91	26.63	142	0.77
195	9.09	33.80	3.54	184	400	6.58	34.12	1.07	26.81	125	0.91
221	8.58	33.93	2.97	166	500	5.93	34.24		26.99	108	1.04
266	8.00	34.04	2.37	150							
314	7.40	34.07	1.74	140							
389	6.68	34.12	1.12	126							
465	6.17	34.20	0.65	114							
539	5.76	34.30	-	102							

a) Alternate value, 16.57°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; August 23, 1959; 0555, 0615 GCT;[a] 30°26'N, 116°11'W; sounding, 365 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 02°, missing. 107.32

2	18.49	33.59	5.56	384	0	(18.49)	(33.59)	(5.56)	(24.08)	(384)	(0.00)
11	17.28	33.57	5.67	357	10	17.53	33.57	5.67	24.31	362	0.04
29	15.00	33.53	5.31	310	20	17.08	33.56	5.64	24.43	351	0.07
33	14.36	33.51	5.22	298	30	14.89	33.52	5.31	24.88	308	0.11
38	13.80	33.51	5.01	287	50	12.80	33.51	4.74	25.30	268	0.16
42	13.52	33.50	4.98	283	75	11.97	33.67	3.26	25.58	242	0.23
47	13.14	33.48	4.83	276	100	11.56	33.67	3.15	25.67	233	0.29
51	12.74	33.54	4.68	265	150	10.59	33.89	1.89	26.01	201	0.40
56	12.60	33.53	4.45	263							
60	12.44	33.56	4.33	258							
65	12.32	33.58	4.07	254							
69	12.22	33.64	3.57	248							
74	12.07	33.66	3.30	244							
78	11.86	33.68	3.27	238							
83	11.84	33.67	3.26	239							
87	11.80	33.66	3.26	239							
136	10.85	33.88	1.88	206							
181	10.10	33.89	2.51	193							

BLACK DOUGLAS; August 23, 1959; 0754 GCT; 30°20'N, 116°23'W; sounding, 840 fm; wind, 180°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°. 107.35

2	21.10	33.73	5.12	438	0	(21.10)	(33.73)	(5.12)	(23.52)	(438)	(0.00)
11	20.64	33.75	5.33	424	10	20.70	33.75	5.31	23.64	426	0.04
29	16.96	33.60	5.80	347	20	19.85	33.73	5.50	23.85	406	0.08
38	15.56	33.55	5.61	320	30	16.75	33.59	5.80	24.51	343	0.12
51	14.88	33.56	5.10	305	50	14.93	33.56	5.16	24.89	307	0.19
64	13.90	33.59	4.84	283	75	12.38	33.50	4.44	25.38	261	0.26
87	11.88	33.56	4.06	248	100	11.24	33.70	3.17	25.74	226	0.32
104	11.32	33.79	2.95	221	150	10.34	33.95	2.44	26.10	192	0.42
122	10.56	33.92	2.42	198	200	9.74	34.12	1.95	26.33	170	0.52
140	10.36	33.93	2.49	194	250	9.42	34.23	1.40	26.47	157	0.60
167	10.34	34.01	2.30	188	300	8.93	34.29	1.03	26.60	145	0.68
198	9.75	34.10	2.05	172	400	7.78	34.30	0.68	26.79	127	0.82
224	9.80	34.23	1.42	163	500	6.80	34.33	0.47	26.95	112	0.94
267	9.12	34.23	1.34	153							
316	8.82	34.32	0.94	141							
391	7.90	34.31	0.71	129							
466	7.11	34.32	0.44	117							
542	6.42	34.31	0.50	109							

BLACK DOUGLAS; August 23, 1959; 1039 GCT; 30°10.5'N, 116°43.5'W; sounding, 1500 fm; wind, 200°, force 3; weather, overcast; sea, moderate; wire angle, missing. 107.40

2	21.60	33.73	5.09	451	0	(21.60)	(33.73)	(5.09)	(23.38)	(451)	(0.00)
11	21.54	33.69	5.27	452	10	21.55	33.69	5.26	23.37	452	0.04
29	18.17	33.60	5.47	375	20	20.50	33.66	5.37	23.62	428	0.09
38	16.86	33.54	5.57	349	30	18.02	33.59	5.46	24.21	372	0.13
51	15.63	33.53	5.63	323	50	15.79	33.53	5.63	24.69	326	0.20
65	14.72	33.53	5.47	304	75	13.96	33.51	5.33	25.07	290	0.28
87	12.96	33.48	5.26	273	100	11.86	33.50	5.20	25.47	252	0.35
104	11.72	33.53	5.13	247	150	9.60	33.71	3.82	26.03	199	0.46
122	10.82	33.57	4.47	229	200	8.66	33.94	2.77	26.36	167	0.55
139	9.87	33.66	4.13	207	250	8.16	34.11	2.00	26.58	147	0.63
166	9.30	33.78	3.36	189	300	7.83	34.20	1.56	26.69	136	0.71
197	8.71	33.92	2.80	169	400	7.22	34.29	0.86	26.85	121	0.84
224	8.36	34.05	2.38	154	500	6.66	34.34	0.45	26.97	110	0.96
268	8.03	34.15	1.81	142							
316	7.72	34.22	1.45	133							
391	7.26	34.28	0.97	122							
467	6.90	34.33	0.44	114							
543	6.24	34.36	0.61	103							

a) Test cast.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{3}^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3}^{-5} 10 cm/g	ΔD dyn. m

107.50 BLACK DOUGLAS; August 23, 1959; 1623 GCT; 29°54'N, 117°22'W; sounding, 1240 fm; wind, 140°, force 4; weather, overcast; sea, rough; wire angle, 10°.

2	20.94	33.80	4.98	428	0	(20.94)	(33.80)	(4.98)	(23.62)	(428)	(0.00)
11	20.88	33.80	5.04	426	10	20.89	33.80	5.04	23.63	427	0.04
28	17.83	33.59	5.58	368	20	20.50	33.79	5.22	23.72	418	0.08
37	16.67	33.55	5.53	344	30	17.66	33.58	5.56	24.29	364	0.12
50	15.16	33.54	5.57	312	50	15.16	33.54	5.57	24.84	312	0.19
63	13.24	33.55	4.87	274	75	11.98	33.56	4.72	25.50	249	0.26
85	11.21	33.58	4.59	235	100	10.24	33.71	3.65	25.92	209	0.32
102	10.19	33.73	3.51	206	150	9.98	34.11	1.92	26.28	175	0.42
120	10.22	33.93	-	192	200	9.80	34.33	1.32	26.48	156	0.50
137	10.08	34.04	2.25	182	250	9.38	34.34	0.97	26.57	148	0.58
163	9.94	34.17	1.69	170	300	8.82	34.38	0.87	26.68	137	0.65
193	9.90	34.33	1.27	157	400	7.76	34.36	0.64	26.83	123	0.79
218	9.40	34.27	1.38	154	500	6.62	34.35	0.41	26.98	108	0.91
261	9.38	34.38	0.88	145							
309	8.70	34.39	0.86	134							
383	8.02	34.39	0.67	125							
458	6.97	34.34	0.53	114							
534	6.50	34.38	0.31	105							

107.60 BLACK DOUGLAS; August 23, 1959; 2136 GCT; 29°31'N, 118°03'W; sounding, 1700 fm; wind, 260°, force 5; weather, overcast; sea, moderate; wire angle, 12°.

2	22.03	34.25	4.80	425	0	(22.03)	(34.25)	(4.80)	(23.65)	(425)	(0.00)
10	21.87	34.24	4.84	421	10	21.87	34.24	4.84	23.69	421	0.04
28	21.80	34.25	5.06	418	20	21.82	34.25	5.05	23.71	419	0.08
37	20.44	34.08	4.98	396	30	21.79	34.25	5.06	23.73	418	0.13
50	19.38	33.98	5.24	376	50	19.38	33.98	5.24	24.17	376	0.21
63	18.52	33.92	4.98	360	75	17.78	33.90	4.93	24.50	344	0.30
84	17.19	33.89	4.91	331	100	15.50	33.84	4.92	25.00	297	0.38
101	15.28	33.82	4.92	295	150	10.89	33.73	3.68	25.83	218	0.51
119	13.46	33.73	4.71	265	200	9.90	34.01	2.59	26.22	181	0.61
136	11.58	33.68	3.91	233	250	9.35	34.17	1.82	26.44	160	0.70
160	10.52	33.77	3.50	209	300	8.73	34.33	1.10	26.66	139	0.77
190	9.96	33.95	2.79	186	400	7.59	34.32	0.72	26.83	123	0.91
215	9.84	34.08	2.38	175	500	6.37	34.31	0.40	26.98	108	1.03
256	9.27	34.19	1.73	158							
303	8.70	34.34	1.07	138							
376	7.91	34.33	0.81	127							
450	6.92	34.31	0.55	115							
525	6.16	34.31	0.37	106							

107.70 BLACK DOUGLAS; August 24, 1959; 0238 GCT; 29°11'N, 118°43'W; sounding, 1450 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 12°.

2	21.65	34.13	4.80	423	0	(21.65)	(34.13)	(4.80)	(23.67)	(423)	(0.00)
11	21.64	34.16	4.75	421	10	21.64	34.16	4.75	23.70	421	0.04
28	21.64	34.15	4.75	422	20	21.64	34.15	4.75	23.69	422	0.08
37	20.72	34.14	5.26	398	30	21.30	34.14	5.00	23.78	413	0.13
50	18.92	33.93	5.24	368	50	18.92	33.93	5.24	24.25	368	0.20
63	18.58	33.95	5.29	359	75	17.38	33.85	5.40	24.56	338	0.29
85	16.44	33.73	5.40	326	100	16.14	33.69	5.27	24.72	323	0.38
102	16.10	33.68	5.23	322	150	11.64	33.70	3.97	25.67	233	0.52
119	14.04	33.59	5.15	286	200	10.02	33.85	3.07	26.08	194	0.63
136	12.59	33.68	4.54	251	250	11.03	34.43	1.12	26.34	169	0.72
161	11.00	33.73	3.63	220	300	10.62	34.66	0.20	26.60	145	0.80
191	10.18	33.81	3.23	200	400	7.90	34.44	0.29	26.87	119	0.94
216	9.92	33.97	2.59	184	500	6.60	34.33	0.59	26.96	110	1.06
258	11.12	34.49	0.90	166							
304	10.57	34.69	0.13	141							
378	8.42	34.50	0.21	122							
450	7.02	34.37	0.47	112							
525	6.50	34.32	0.61	109							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; August 24, 1959; 0715 GCT; 28°52'N, 119°19.5'W; sounding, 1820 fm; wind, 270°, force 3; weather, missing; sea, moderate; wire angle, 04°. 107.80

2	21.97	34.23	4.80	424	0	(21.97)	(34.23)	(4.80)	(23.66)	(424)	(0.00)	
11	21.94	34.24	4.80	423	10	21.94	34.24	4.80	23.68	423	0.04	
29	21.90	34.22	4.87	423	20	21.94	34.24	4.80	23.68	423	0.08	
37	20.36	34.18	5.15	386	30	21.85	34.22	4.89	23.69	422	0.13	
51	19.59	34.09	5.18	373	50	19.61	34.09	5.17	24.19	374	0.21	
64	18.96	34.06	5.25	360	75	18.35	34.03	5.26	24.47	347	0.30	
86	18.03	34.02	5.26	341	100	16.62	33.92	5.11	24.79	316	0.38	
104	16.20	33.89	5.07	309	150	11.82	33.71	3.99	25.64	236	0.52	
122	13.54	33.75	4.48	264	200	9.89	33.89	2.96	26.13	189	0.63	
139	12.60	33.75	4.13	247	250	9.05	34.08	2.09	26.41	163	0.72	
166	10.84	33.71	3.74	219	300	8.47	34.17	1.60	26.58	147	0.80	
196	9.97	33.86	3.11	193	400	7.57	34.32	0.70	26.83	123	0.94	
223	9.58	34.02	2.36	175	500	6.39	34.27	0.53	26.95	111	1.06	
266	8.76	34.09	1.97	157								
315	8.36	34.20	1.39	143								
390	7.70	34.32	0.73	125								
466	6.75	34.29	0.57	114								
541	5.97	34.26	0.48	107								

BLACK DOUGLAS; August 24, 1959; 1148 GCT; 28°34'N, 120°00'W; sounding, 1800 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 04°. 107.90

2	22.10	34.34	4.65	420	0	(22.10)	(34.34)	(4.65)	(23.70)	(420)	(0.00)	
11	22.11	34.34	4.74	420	10	22.10	34.34	4.74	23.70	420	0.04	
29	21.80	34.30	4.76	415	20	22.10	34.34	4.74	23.70	420	0.08	
38	21.11	34.36	4.95	392	30	21.73	34.30	4.77	23.78	413	0.13	
51	20.13	34.28	5.07	373	50	20.17	34.28	5.05	24.18	374	0.20	
64	19.63	34.25	5.33	363	75	18.80	34.16	5.25	24.45	349	0.29	
87	17.96	34.09	5.15	334	100	16.29	34.02	4.93	24.95	302	0.38	
104	15.62	33.94	4.83	293	150	11.71	33.69	4.11	25.65	235	0.51	
122	13.82	33.81	4.59	266	200	9.86	33.89	2.88	26.12	190	0.62	
140	12.33	33.72	4.25	244	250	9.03	34.14	1.85	26.46	158	0.71	
166	10.80	33.69	3.87	220	300	8.44	34.27	1.35	26.66	140	0.79	
197	9.96	33.86	2.97	193	400	7.49	34.34	0.71	26.85	121	0.92	
223	9.33	34.03	2.29	170	500	6.48	34.34	0.36	27.00	107	1.04	
268	8.82	34.19	1.65	151								
317	8.28	34.31	1.19	134								
393	7.58	34.34	0.73	122								
469	6.73	34.34	0.44	111								
545	6.16	34.35	0.28	102								

BLACK DOUGLAS; August 23, 1959; 0120 GCT; 29°50.5'N, 115°52'W; sounding, 50 fm; wind, 360°, force 2; weather, cloudy; sea, moderate; wire angle, 00°. 110.33

2	21.98	33.78	4.80	457	0	(21.98)	(33.78)	(4.80)	(23.31)	(457)	(0.00)	
11	20.91	33.71	5.09	434	10	21.08	33.72	5.04	23.52	438	0.04	
29	17.14	33.51	5.53	358	20	18.34	33.55	5.43	24.10	383	0.09	
38	16.36	33.51	5.56	340	30	17.06	33.51	5.54	24.38	356	0.12	

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
110.35	BLACK DOUGLAS; August 23, 1959; 0005 GCT; 29°46.5'N, 116°00'W; sounding, 550 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.										
2	21.74	33.71	4.66	456	0	(21.74)	(33.71)	(4.66)	(23.33)	(456)	(0.00)
11	21.02	33.71	4.98	438	10	21.03	33.71	4.97	23.52	438	0.05
29	17.88	33.51	5.39	375	20	20.34	33.67	5.10	23.68	423	0.09
37	16.97	33.49	5.41	355	30	17.81	33.50	5.40	24.20	373	0.13
51	15.78	33.49	5.39	329	50	15.85	33.49	5.39	24.64	331	0.20
64	14.84	33.51	5.39	308	75	13.95	33.51	5.24	25.07	290	0.28
86	13.12	33.51	5.03	274	100	12.13	33.51	4.79	25.43	256	0.35
103	11.62	33.48	4.38	249	150	9.72	33.70	3.58	26.01	201	0.46
121	10.98	33.55	4.42	232	200	9.16	33.98	2.35	26.32	171	0.56
139	9.92	33.64	3.79	209	250	9.40	34.26	1.32	26.50	154	0.64
165	9.44	33.77	3.39	192	300	8.72	34.29	1.11	26.63	142	0.72
196	9.16	33.95	2.50	174	400	7.59	34.34	0.59	26.84	122	0.85
223	9.62	34.20	1.69	162	500	6.76	34.34	0.40	26.96	111	0.98
267	9.19	34.29	1.19	149							
314	8.52	34.29	1.09	139							
390	7.66	34.34	0.61	123							
465	7.06	34.34	0.47	115							
541	6.38	34.38	0.31	103							
110.40	BLACK DOUGLAS; August 22, 1959; 2104 GCT; 29°36.5'N, 116°19.5'W; sounding, 1100 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 03°.										
2	21.70	33.75	5.00	452	0	(21.70)	(33.75)	(5.00)	(23.37)	(452)	(0.00)
11	21.40	33.78	5.33	442	10	21.40	33.78	5.33	23.47	442	0.04
29	21.33	33.75	5.24	442	20	21.36	33.76	5.28	23.47	442	0.09
38	17.40	33.58	5.93	358	30	21.32	33.75	5.24	23.48	441	0.13
51	15.37	33.58	5.76	314	50	15.55	33.58	5.80	24.78	318	0.21
64	13.04	33.51	4.88	273	75	12.00	33.52	4.41	25.47	252	0.28
86	11.30	33.58	4.09	236	100	10.95	33.64	3.93	25.75	225	0.34
104	10.72	33.66	3.81	220	150	9.27	33.85	3.00	26.19	183	0.44
122	10.06	33.75	3.23	203	200	8.35	33.99	2.52	26.45	159	0.53
139	9.74	33.84	3.02	191	250	7.72	34.09	1.92	26.63	142	0.61
166	8.80	33.89	2.90	173	300	7.65	34.19	1.28	26.71	134	0.68
197	8.40	33.98	2.55	160	400	6.95	34.27	0.72	26.87	119	0.81
223	7.98	34.04	2.25	150	500	6.00	34.28	0.52	27.01	106	0.93
267	7.62	34.12	1.72	139							
315	7.66	34.22	1.12	132							
391	7.03	34.27	0.75	120							
466	6.20	34.25	0.59	110							
542	5.82	34.36	0.42	98							
110.50	BLACK DOUGLAS; August 22, 1959; 1621 GCT; 29°16.5'N, 116°56'W; sounding, 1480 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 05°.										
2	21.54	33.82	4.81	442	0	(21.54)	(33.82)	(4.81)	(23.48)	(442)	(0.00)
11	21.52	33.82	4.83	442	10	21.53	33.82	4.82	23.48	442	0.04
29	17.95	33.61	5.45	369	20	19.82	33.72	5.29	23.85	406	0.09
38	16.66	33.53	5.42	346	30	17.93	33.61	5.45	24.25	368	0.12
51	15.08	33.50	5.51	314	50	15.18	33.50	5.51	24.81	315	0.19
64	13.59	33.46	5.19	287	75	12.82	33.49	5.18	25.28	270	0.27
87	12.04	33.53	5.18	253	100	11.18	33.60	4.16	25.68	232	0.33
104	10.92	33.63	3.89	226	150	9.29	33.86	3.02	26.21	182	0.44
122	10.08	33.73	3.39	205	200	9.76	34.28	1.30	26.46	158	0.52
140	9.53	33.82	3.13	189	250	8.95	34.28	1.07	26.58	146	0.60
167	9.06	33.96	2.73	172	300	8.40	34.34	0.81	26.71	134	0.67
198	9.76	34.27	1.31	160	400	6.59	34.24	0.62	26.90	116	0.80
224	8.83	34.18	1.57	152	500	5.94	34.33	0.41	27.06	101	0.92
269	9.06	34.36	0.79	142							
317	7.94	34.31	0.81	129							
393	6.64	34.23	0.66	118							
467	6.16	34.34	0.41	103							
543	5.68	34.31	0.41	100							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; August 22, 1959; 0955 GCT; 28°57'N, 117°38'W; sounding, 1780 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 12°. 110.60

2	20.13	33.68	5.18	416	0	(20.13)	(33.68)	(5.18)	(23.74)	(416)	(0.00)
10	20.10	33.70	5.13	414	10	20.10	33.70	5.13	23.76	414	0.04
28	19.16	33.71	5.32	390	20	20.05	33.71	5.12	23.78	413	0.08
37	18.22	33.75	5.57	365	30	18.95	33.72	5.36	24.07	385	0.12
50	17.66	33.64	5.74	360	50	17.66	33.64	5.74	24.33	360	0.20
63	17.16	33.58	5.45	353	75	16.83	33.58	5.46	24.48	346	0.28
84	16.31	33.60	5.56	333	100	15.55	33.69	5.54	24.86	310	0.37
102	15.34	33.69	5.47	305	150	11.49	33.63	4.21	25.64	236	0.51
119	14.16	33.69	5.22	281	200	9.77	34.00	2.50	26.24	179	0.61
135	12.73	33.60	5.08	260	250	8.81	34.08	2.13	26.45	159	0.70
160	10.94	33.73	3.53	218	300	8.41	34.20	1.60	26.60	145	0.78
190	10.16	34.00	2.56	186	400	7.14	34.24	0.92	26.82	124	0.92
215	9.25	34.01	2.42	171	500	6.39	34.30	0.47	26.98	109	1.04
257	8.79	34.11	2.01	156							
303	8.39	34.20	1.53	144							
376	7.37	34.22	1.03	128							
448	6.74	34.27	0.67	116							
523	6.24	34.31	0.41	107							

BLACK DOUGLAS; August 21, 1959; 2004 GCT; 28°36.5'N, 118°18'W; sounding, 1580 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 06°. 110.70

2	21.68	34.18	4.95	420	0	(21.68)	(34.18)	(4.95)	(23.70)	(420)	(0.00)
11	21.64	34.14	5.01	422	10	21.65	34.14	5.01	23.69	422	0.04
28	21.60	34.13	4.95	421	20	21.61	34.13	4.95	23.69	422	0.08
37	21.58	34.18	5.02	417	30	21.60	34.15	4.99	23.70	420	0.13
50	19.30	33.89	5.35	381	50	19.30	33.89	5.35	24.12	381	0.21
63	18.51	33.93	5.45	359	75	18.00	33.91	5.43	24.46	348	0.30
85	17.52	33.88	5.40	339	100	16.42	33.75	5.45	24.71	324	0.38
101	16.36	33.74	5.45	323	150	11.75	33.77	3.94	25.70	230	0.52
118	14.52	33.80	4.83	280	200	10.08	33.94	2.94	26.14	189	0.63
135	12.72	33.77	4.35	247	250	9.72	34.24	1.56	26.43	161	0.72
159	11.32	33.77	3.71	222	300	9.58	34.36	0.96	26.54	150	0.80
188	10.36	33.88	3.07	198	400	8.08	34.33	0.89	26.76	130	0.94
213	9.90	34.02	2.69	180	500	6.80	34.29	0.59	26.91	115	1.07
254	9.70	34.25	1.48	160							
301	9.58	34.36	0.95	150							
374	8.50	34.35	0.95	134							
448	7.41	34.29	0.75	123							
524	6.54	34.30	0.47	111							

BLACK DOUGLAS; August 21, 1959; 1421 GCT; 28°20'N, 119°00'W; sounding, 1850 fm; wind, 360°, force 4; weather, overcast; sea, rough; wire angle, 16°. 110.80

2	21.23	33.99	4.34	422	0	(21.23)	(33.99)	(4.34)	(23.68)	(422)	(0.00)
10	21.24	33.95	4.75	425	10	21.24	33.95	4.75	23.65	425	0.04
32	20.70	34.15	4.90	397	20	21.23	33.95	4.76	23.65	425	0.08
40	20.38	34.18	5.05	386	30	20.80	34.12	4.87	23.90	402	0.13
53	19.46	34.11	5.19	370	50	19.85	34.15	5.17	24.17	376	0.20
66	18.62	34.00	4.92	356	75	18.20	34.00	4.96	24.47	347	0.29
86	17.47	33.89	4.97a)	330	100	16.56	33.98	4.97	24.86	310	0.38
104	16.1	33.96	4.94	302	150	12.20	33.72	4.20	25.59	241	0.52
120	14.64	33.84	4.06	280	200	10.12	34.02	2.48	26.19	184	0.63
145	12.48	33.73	4.23	246	250	9.56	34.21	1.76	26.43	161	0.71
169	11.00	33.75	3.79	218	300	9.06	34.32	1.17	26.60	145	0.80
204	10.07	34.05	2.38	181	400	7.95	34.34	0.58	26.79	127	0.94
228	9.79	34.14	2.03	170	500	6.83	34.36	0.37	26.96	111	1.06
270	9.37	34.27	1.49	153							
324	8.84	34.33	0.99	141							
409	7.84	34.34	0.53	126							
487	6.94	34.35	0.35	112							
553	6.40	34.33	0.49	107							

a) Mean value of 4.90 and 5.04 ml/L.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
113.30	BLACK DOUGLAS; August 20, 1959; 0705 GCT; 29°22.5'N, 115°17.5'W; sounding, 30 fm; wind, 260°, force 4; weather, clear; sea, slight; wire angle, 00°.										
2	19.54	33.64	5.09	405	0	(19.54)	(33.64)	(5.09)	(23.86)	(405)	(0.00)
11	19.51	33.69	5.06	401	10	19.52	33.69	5.06	23.90	401	0.04
29	15.30	33.57	5.29	313	20	17.46	33.63	5.18	24.38	356	0.08
113.35	BLACK DOUGLAS; August 20, 1959; 0953 GCT; 29°12'N, 115°39'W; sounding, 540+ fm; wind, 260°, force 4; weather, clear; sea, moderate; wire angle, 26°.										
2	21.13	33.78	4.58	435	0	(21.33)	(33.78)	(4.58)	(23.55)	(435)	(0.00)
10	21.14	33.81	4.79	433	10	21.14	33.81	4.79	23.57	433	0.04
26	21.18	33.80	4.78	434	20	21.17	33.80	4.78	23.56	434	0.09
34	18.41	33.59	4.99	381	30	20.50	33.72	4.84	23.67	423	0.13
46	17.38	33.58	5.14	358	50	17.10	33.59	5.19	24.43	351	0.21
57	16.76	33.59	5.26	343	75	15.71	33.58	5.21	24.75	321	0.29
77	15.70	33.58	5.21	321	100	13.57	33.54	5.04	25.17	280	0.37
93	14.24	33.50	5.18	297	150	9.94	33.68	3.70	25.96	205	0.49
108	12.76	33.61	4.74	260	200	9.23	33.97	2.37	26.30	173	0.59
124	11.62	33.58	4.50	242	250	9.69	34.39	1.05	26.55	149	0.67
147	10.02	33.67	3.80	208	300	8.80	34.37	0.93	26.68	137	0.74
175	9.51	33.85	3.13	186	400	7.70	34.38	0.55	26.85	121	0.88
199	9.23	33.97	2.41	174	500	(6.76)	(34.42)	(0.48)	(27.02)	(105)	(1.00)
239	9.74	34.36	1.12	153							
284	9.14	34.39	0.94	141							
353	7.86	34.33	0.93	127							
424	7.60	34.40	0.46	118							
498	6.79	34.42	0.48	105							
113.40	BLACK DOUGLAS; August 20, 1959; 1246 GCT; 29°02'N, 115°58.5'W; sounding, 900 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 07°.										
2	21.14	33.80		434	0	(21.14)	(33.80)		(23.56)	(434)	(0.00)
11	21.16	33.80		434	10	21.16	33.80		23.56	434	0.04
29	18.85	33.66		387	20	21.02	33.80		23.60	430	0.09
38	18.38	33.62		378	30	18.85	33.67		24.06	386	0.13
51	18.20	33.75		365	50	18.22	33.74		24.27	366	0.20
64	17.14	33.62		350	75	16.28	33.55		24.59	336	0.29
86	15.83	33.53		328	100	14.90	33.52		24.88	308	0.37
104	14.56	33.53		301	150	10.06	33.69		25.94	207	0.50
122	13.02	33.57		268	200	8.97	33.89		26.27	176	0.60
139	11.04	33.62		229	250	8.42	34.11		26.54	151	0.69
165	9.48	33.78		192	300	8.52	34.31		26.67	138	0.76
196	9.01	33.87		158	400	7.23	34.35		26.89	117	0.89
222	8.70	34.04		160	500	6.23	34.36		27.04	103	1.01
266	8.38	34.16		146							
315	8.57	34.36		134							
390	7.33	34.34		118							
466	6.58	34.37		106							
541	5.98	34.34		101							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; August 20, 1959; 1756 GCT; 28°44.5'N, 116°37'W; sounding, 1950 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 10°.											113.50
2	20.90	33.84	-	425	0	(20.90)	(33.84)		(23.66)	(425)	(0.00)
11	20.82	33.86	4.96	421	10	20.83	33.86		23.69	421	0.04
28	20.22	33.80	4.98	410	20	20.80	33.86	4.97	23.70	420	0.08
36	18.70	33.66	5.22	383	30	19.90	33.77	5.02	23.87	404	0.13
50	17.67	33.65	5.32	362	50	17.67	33.65	5.32	24.32	362	0.20
63	16.50	33.50	5.46	344	75	16.09	33.50	5.46	24.60	335	0.29
84	15.28	33.53	5.42	316	100	14.52	33.61	5.26	25.02	294	0.37
101	14.44	33.62	5.24	292	150	11.41	33.71	3.84	25.71	229	0.50
118	13.72	33.78	4.84	266	200	9.78	34.00	2.44	26.23	180	0.60
135	12.14	33.64	4.47	247	250	8.84	34.15	1.90	26.50	154	0.69
160	11.00	33.78	3.29	216	300	7.38	34.12	1.77	26.70	135	0.77
190	10.10	33.96	2.55	188	400	7.22	34.29	0.57	26.85	121	0.90
215	9.38	34.04	2.31	170	500	6.45	34.33	0.32	26.99	108	1.02
257	8.66	34.15	1.83	152							
304	7.34	34.13	1.71	134							
377	7.30	34.27	0.69	124							
452	6.94	34.33	0.36	114							
529	6.08	34.33	0.33	104							
BLACK DOUGLAS; August 20, 1959; 2352 GCT; 28°22'N, 117°16.5'W; sounding, 1800 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 22°.											113.60
2	20.92	33.74	5.11	432	0	(20.92)	(33.74)	(5.11)	(23.58)	(432)	(0.00)
10	20.90	33.73	4.90	432	10	20.90	33.73	4.90	23.58	432	0.04
31	20.60	33.95	4.99	409	20	20.88	33.73	4.89	23.58	432	0.09
39	19.73	33.89	5.48	391	30	20.75	33.93	4.93	23.77	414	0.13
51	18.76	33.91	5.32	366	50	18.65	33.85	5.35	24.25	368	0.21
63	17.55	33.64	5.23	357	75	17.32	33.75	5.07	24.50	344	0.30
83	17.12	33.84	5.00	333	100	16.10	33.84	5.07	24.85	311	0.38
99	16.2	33.84	5.07	312	150	11.19	33.67		25.72	228	0.52
115	14.33	33.75	5.00	280	200	9.41	33.85		26.18	185	0.62
137	12.26	33.69	-	245	250	8.53	34.01		26.44	160	0.71
161	10.56	33.69	-	215	300	7.94	34.10		26.60	145	0.79
193	9.54	33.82	-	189	400	6.81	34.20	0.97	26.84	122	0.93
216	9.17	33.91	-	177	500	6.24	34.33	0.46	27.01	106	1.05
256	8.44	34.02	-	158							
308	7.86	34.11	1.69	143							
389	6.90	34.19	1.07	124							
463	6.46	34.29	0.53	111							
528	6.10	34.35	0.42	102							
BLACK DOUGLAS; August 21, 1959; 0435 GCT; 28°02'N, 117°55.5'W; sounding, 1850 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 10°.											113.70
3	21.74	33.89	5.04	443	0	(21.74)	(33.89)	(5.04)	(23.47)	(443)	(0.00)
12	21.74	33.91	4.97	441	10	21.74	33.91	4.99	23.48	442	0.04
34	19.30	33.82	5.41	386	20	21.25	33.90	5.10	23.61	429	0.09
43	18.66	33.85	5.39	368	30	19.68	33.83	5.43	23.97	395	0.13
56	17.74	33.75	5.55	354	50	18.41	33.83	5.40	24.29	364	0.20
69	17.12	33.69	5.58	344	75	16.90	33.68	5.55	24.54	340	0.29
91	15.88	33.69	5.44	317	100	15.15	33.69	5.37	24.96	301	0.38
108	14.71	33.75	5.29	288	150	11.94	33.68	4.47	25.59	240	0.51
125	13.66	33.71	4.86	270	200	9.96	33.89	3.02	26.11	191	0.62
151	11.82	33.68	4.42	238	250	8.84	34.05	2.36	26.42	162	0.71
177	10.22	33.70	3.98	209	300	8.47	34.21	1.72	26.60	145	0.79
211	9.80	33.95	2.73	184	400	7.72	34.31	0.91	26.80	126	0.93
237	9.06	34.01	2.46	168	500	6.63	34.36	0.44	26.99	108	1.06
280	8.53	34.14	2.02	150							
337	8.32	34.31	1.16	135							
424	7.44	34.31	0.84	123							
501	6.61	34.36	0.43	108							
567	5.94	34.42	0.36	95							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

113.80 BLACK DOUGLAS; August 21, 1959; 0920 GCT; 27°44.5'N, 118°36'W; sounding, 2050 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 26°.a)

2	21.67	33.87	4.74	443	0	(21.67)	(33.87)	(4.74)	(23.46)	(443)	(0.00)
11	21.68	33.88	4.82	442	10	21.68	33.88	4.81	23.48	442	0.04
33	18.68	33.84	5.33	370	20	19.40	33.86	5.32	24.07	385	0.09
42	18.04	33.78	5.31	359	30	18.81	33.85	5.32	24.21	372	0.12
54	17.58	33.78	5.31	348	50	17.60	33.72	5.31	24.41	353	0.20
68	16.14	33.62	5.37	327	75	16.00	33.63	5.34	24.72	323	0.28
90	15.54	33.72	5.12	307	100	14.40	33.63	4.98	25.07	390	0.36
108	14.04	33.71	4.82	278	150	11.18	33.78	3.43	25.81	219	0.48
125	12.58	33.78	4.18	244	200	10.04	34.09	2.17	26.26	177	0.59
151	11.10	33.78	3.39	218	250	9.48	34.28	1.39	26.49	155	0.67
177	10.24	33.92	2.78	193	300	8.85	34.34	0.92	26.65	140	0.75
211	9.96	34.15	1.87	171	400	7.70	34.38	0.50	26.85	121	0.88
236	9.62	34.24	1.52	160	500	6.86	34.36	0.31	26.96	111	1.01
278	9.14	34.33	1.08	145							
334	8.41	34.36	0.69	132							
420	7.53	34.38	0.46	118							
499	6.88	34.36	0.31	111							
564	6.14	34.38	0.24	100							

117.26 BLACK DOUGLAS; August 20, 1959; 0222 GCT; 28°56'N, 114°41'W; sounding, 40 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 02°.

2	20.24	33.71	5.30	417	0	(20.24)	(33.71)	(5.30)	(23.74)	(417)	(0.00)
11	20.11	33.69	5.28	416	10	20.13	33.69	5.29	23.75	416	0.04
29	14.86	33.60	4.38	302	20	17.57	33.60	4.82	24.33	360	0.08
47	12.66	33.61	3.88	258	30	14.70	33.60	4.32	24.98	299	0.11

117.30 BLACK DOUGLAS; August 20, 1959; 0024 GCT; 28°48'N, 114°56.5'W; sounding, 52 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

1	21.04	33.73	4.99	437	0	(21.04)	(33.73)	(4.99)	(23.53)	(437)	(0.00)
10	19.52	33.68	5.23	402	10	19.52	33.68	5.23	23.90	402	0.04
28	14.84	33.60	5.08	302	20	16.50	33.60	5.23	24.58	337	0.08
46	13.32	33.61	3.90	271	30	14.65	33.60	4.96	24.99	298	0.11
68	11.81	33.63	4.11	242	50	13.04	33.61	3.90	25.32	265	0.17

117.35 BLACK DOUGLAS; August 19, 1959; 2153 GCT; 28°38'N, 115°16'W; sounding, 120 fm; wind, 330°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.

2	20.13	33.66	5.04	418	0	(20.13)	(33.66)	(5.04)	(23.73)	(418)	(0.00)
11	19.71	33.66	5.12	407	10	19.73	33.66	5.12	23.83	408	0.04
29	19.51	33.64	5.19	404	20	19.64	33.65	5.17	23.85	406	0.08
47	17.24	33.58	5.39	355	30	19.40	33.64	5.20	23.90	402	0.12
70	15.80	33.57	5.48	324	50	17.07	33.58	5.39	24.43	351	0.20
92	13.68	33.49	5.33	286	75	15.75	33.58	5.48	24.74	322	0.28
114	11.75	33.58	4.29	244	100	12.94	33.50	5.07	25.27	272	0.36
151	10.92	33.85	3.02	210	150	10.94	33.84	3.07	25.91	210	0.48
187	10.66	-	-								

117.40 BLACK DOUGLAS; August 19, 1959; 0928 GCT; 28°28'N, 115°35.5'W; sounding, 450 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 15°.

2	21.12	33.73	4.81	438	0	(21.12)	(33.73)	(4.81)	(23.52)	(438)	(0.00)
10	21.10	33.69	4.79	440	10	21.10	33.69	4.79	23.49	440	0.04
28	19.08b)	33.64	5.15	394	20	20.10	33.66	4.99	23.74	417	0.09
45	17.08	33.60	5.37	350	30	18.90	33.63	5.18	24.02	390	0.13
67	15.64	33.69	5.16	312	50	16.98	33.60	5.36	24.47	347	0.20
88	14.08	33.68	4.85	281	75	15.10	33.70	5.08	24.97	300	0.28
109	12.14	33.73	3.86	240	100	12.97	33.71	4.37	25.42	257	0.35
143	11.24	33.96	2.43	207	150	11.26	34.02	2.14	25.98	203	0.47
178	11.54	34.23	1.37	192							

a) An assumed wire angle of 11° was used in depth determination.
b) Alternate value, 19.47°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; August 19, 1959; 0406 GCT; 28°08'N, 116°15'W; sounding, 2100 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.											117.50
2	21.76	33.88	4.89	444	0	(21.76)	(33.88)	(4.89)	(23.45)	(444)	(0.00)
11	21.74	33.86	4.94	445	10	21.74	33.86	4.93	23.44	445	0.04
29	21.09	33.86	5.15	428	20	21.66	33.86	4.99	23.46	443	0.09
38	18.94	33.71	5.46	385	30	20.75	33.84	5.22	23.70	420	0.13
51	17.90	33.77	5.51	356	50	17.98	33.77	5.51	24.35	358	0.21
65	17.38	33.75	5.53	345	75	17.00	33.74	5.50	24.57	338	0.30
87	16.41	33.73	5.42	326	100	14.80	33.70	5.11	25.04	293	0.38
104	14.68	33.71	5.07	290	150	11.43	33.79	3.55	25.77	223	0.51
122	12.92	33.66	4.48	260	200	9.92	34.02	2.43	26.23	180	0.61
139	11.73	33.69	4.00	235	250	9.29	34.21	1.57	26.48	156	0.70
166	11.00	33.89	2.75	208	300	8.68	34.31		26.66	140	0.77
197	9.94	34.00	2.48	182	400	7.58	34.33		26.83	123	0.91
224	9.62	34.14	1.98	167	500	6.72	34.35		26.97	110	1.03
269	9.04	34.26	1.37	149							
318	8.48	34.33	0.61u	136							
394	7.66	34.33	1.00u	124							
469	6.96	34.35	0.37	113							
546	6.38	34.35	0.36	105							
BLACK DOUGLAS; August 19, 1959; 0029 GCT;[a] 27°57.5'N, 116°34.5'W; sounding, 2000+ fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.											117.55
9	22.48	33.87	4.85	464							
88	15.94	33.73	5.48	315							
174	11.27	34.17	1.72	192							
192	11.13	34.29	1.42	180							
201	10.36	34.23	1.59	172							
209	10.47	34.27	1.37	171							
218	10.68	34.40	0.97	165							
227	10.29	34.32	1.28	164							
236	10.48	34.43	0.75	160							
252	10.27	34.48	0.60	152							
262	10.26	34.56	0.54	146							
270	10.25	34.49	0.74	151							
280	10.03	34.47	0.78	150							
289	10.09	34.60	0.45	141							
298	9.97	34.60	0.48	138							
307	9.95	34.55	0.45	142							
329	9.10	34.45	0.56	136							
352	8.66	34.34	0.97	137							
BLACK DOUGLAS; August 18, 1959; 2124 GCT; 27°47.5'N, 116°54'W; sounding, 2000+ fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 01°.											117.60
1	22.55	33.88	4.52	465	0	(22.55)	(33.88)	(4.52)	(23.24)	(465)	(0.00)
10	22.37	33.90	4.54	459	10	22.37	33.90	4.54	23.30	459	0.05
28	19.73	33.89	5.09	391	20	22.30	33.90	4.56	23.32	457	0.09
37	19.06	33.89	5.11	375	30	19.42	33.89	5.10	24.09	384	0.13
51	18.56	33.86	5.18	365	50	18.63	33.86	5.17	24.26	367	0.21
64	18.06	33.86	5.02	354	75	17.72	33.84	5.07	24.48	347	0.30
86	16.42	33.77	5.23	323	100	15.20	33.73	4.98	24.98	299	0.38
104	14.33	33.71	4.69	283	150	11.18	33.86	2.78	25.88	213	0.51
122	12.52	33.68	4.26	251	200	10.27	34.15	1.81	26.26	177	0.61
140	11.40	33.78	3.19	223	250	10.59	34.48	0.70	26.47	157	0.69
167	10.82	34.00	2.21	197	300	9.93	34.47	0.60	26.58	147	0.77
197	10.28	34.13	1.86	178	400	8.42	34.38	0.55	26.75	131	0.92
223	10.51	34.35	1.14	166	500	6.88	34.34	0.34	26.94	113	1.04
268	10.56	34.54	0.56	153							
317	9.60	34.43	0.60	145							
391	8.56	34.38	0.57	133							
467	7.24	34.33	0.39	118							
543	6.50	34.36	0.26	106							

a) Test cast.

SIO

CCOFI 5908

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

117.70 BLACK DOUGLAS; August 18, 1959; 1601 GCT; 27°27.5'N, 117°32.5'W; sounding, 1900 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 08°.

2	22.68	33.89		468	0	(22.68)	(33.89)		(23.20)	(468)	(0.00)
11	22.65	33.91		466	10	22.65	33.91		23.22	466	0.05
28	20.21	33.75		414	20	22.60	33.91		23.24	464	0.09
37	18.64	33.71		378	30	19.80	33.74		23.87	404	0.14
50	17.52	33.65		356	50	17.52	33.65		24.38	356	0.21
63	17.00	33.68		342	75	16.60	33.68		24.62	333	0.30
85	15.56	33.64		314	100	14.31	33.60		25.06	291	0.38
102	14.18	33.60		288	150	10.26	33.61		25.84	216	0.51
120	12.30	33.58		254	200	9.43	33.90		26.21	182	0.61
137	11.09	33.57		233	250	9.60	34.31		26.50	154	0.69
163	9.83	33.70		203	300	8.97	34.35		26.64	141	0.77
194	9.40	33.83		186	400	7.70	34.34		26.82	124	0.91
220	9.62	34.13		168	500	6.76	34.39		27.00	107	1.03
264	9.29	34.31		150							
312	8.86	34.36		139							
387	7.84	34.34		126							
462	7.07	34.38		112							
538	6.46	34.40		103							

117.80 BLACK DOUGLAS; August 18, 1959; 1015 GCT; 27°08'N, 118°12'W; sounding, 2050 fm; wind, 300°, force 3; weather, cloudy; sea, slight; wire angle, 02°.

2	23.11	33.91	4.51	478	0	(23.11)	(33.91)	(4.51)	(23.10)	(478)	(0.00)
11	23.10	33.91	4.56	478	10	23.10	33.91	4.55	23.10	478	0.05
29	18.92	33.71	5.22	384	20	21.50	33.78	4.89	23.45	444	0.09
38	18.41	33.77	5.36	368	30	18.90	33.71	5.25	24.08	384	0.14
51	17.26	33.66	5.37	350	50	17.37	33.66	5.36	24.42	352	0.21
65	16.17	33.66	5.35	325	75	15.60	33.67	5.22	24.83	313	0.29
87	14.45	33.73	5.02	284	100	13.00	33.70	4.72	25.40	258	0.36
105	12.53	33.71	4.38	249	150	11.01	34.06	2.38	26.06	196	0.48
123	11.84	33.80	3.18	230	200	9.83	34.28	1.70	26.44	160	0.57
140	11.10	33.98	2.63	203	250	9.66	34.39	0.84	26.56	149	0.65
167	10.78	34.14	1.92	186	300	9.30	34.45	0.57	26.66	139	0.73
198	9.84	34.27	1.71	161	400	7.56	34.36	0.62	26.86	120	0.86
224	9.74	34.32	1.24	156	500	6.80	34.37	0.40	26.97	109	0.98
269	9.60	34.45	0.63	144							
318	9.03	34.42	0.55	138							
393	7.62	34.36	0.64	121							
469	7.02	34.37	0.39	113							
545	6.43	34.38	0.45	104							

118.39 BLACK DOUGLAS; August 19, 1959; 1133 GCT; 28°18.5'N, 115°24'W; sounding, 130 fm; wind, 330°, force 3; weather, cloudy; sea, moderate; wire angle, 12°.

2	21.28	33.71	4.89	444	0	(21.28)	(33.71)	(4.89)	(23.45)	(444)	(0.00)
28	15.80	33.57	5.34	324	10	20.00	33.65	5.07	23.76	415	0.04
50	13.97	33.64	4.69	281	20	17.20	33.58	5.29	24.40	354	0.08
72	12.70	33.87	3.03	240	30	15.74	33.57	5.33	24.73	323	0.12
94	12.28	33.91	2.49	229	50	13.97	33.64	4.69	25.16	281	0.18
112	12.00	33.97	2.09	220	75	12.61	33.89	2.87	25.63	237	0.24
128	11.28	33.89	2.59	213	100	12.13	33.93	2.27	25.75	226	0.30
137	11.06	33.89	2.65	209							

119.33 BLACK DOUGLAS; August 16, 1959; 1920 GCT; 28°19'N, 114°53'W; sounding, 60 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 03°.

1	21.18	33.80	4.98	435	0	(21.18)	(33.80)	(4.98)	(23.55)	(435)	(0.00)
10	21.08	33.75	4.92	436	10	21.08	33.75	4.92	23.54	436	0.04
28	17.08	33.71	5.27	342	20	17.30	33.72	5.24	24.48	346	0.08
46	15.56	33.57	5.48	318	30	17.00	33.70	5.29	24.54	341	0.12
68	13.42	33.62	4.97	272	50	15.15	33.57	5.41	24.86	310	0.18

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m

BLACK DOUGLAS; August 16, 1959; 2308 GCT; 28°23'N, 114°14.5'W; sounding, 30 fm; wind, 320°, force 4; weather, partly cloudy; sea, slight; wire angle, 08°. 120.25

2	22.46	33.82	4.70	467	0	(22.46)	(33.82)	(4.70)	(23.21)	(467)	(0.00)
11	22.42	33.84	4.74	465	10	22.43	33.84	4.73	23.23	465	0.05
28	17.24	33.66	5.28	349	20	20.78	33.80	4.97	23.66	425	0.09
46	15.10	33.57	5.43	309	30	17.03	33.65	5.29	24.49	345	0.13

BLACK DOUGLAS; August 17, 1959; 0135 GCT; 28°13'N, 114°34'W; sounding, 53 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 07°. 120.30

2	21.97	33.81	5.02	454	0	(21.97)	(33.81)	(5.02)	(23.35)	(454)	(0.00)
11	21.92	33.77	5.09	456	10	21.94	33.78	5.08	23.33	456	0.05
29	15.44	33.62	5.43	313	20	16.22	33.63	5.45	24.67	328	0.08
47	13.34	33.66	4.90a)	267	30	15.36	33.62	5.40	24.86	310	0.12

BLACK DOUGLAS; August 16, 1959; 1823 GCT; 28°03'N, 114°54'W; sounding, 47 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 12°. 120.35

2	21.02	33.75	5.10	434	0	(21.02)	(33.75)	(5.10)	(23.56)	(434)	(0.00)
10	20.89	33.73	5.15	432	10	20.89	33.73	5.15	23.58	432	0.04
28	19.72	33.69	5.22	405	20	19.94	33.70	5.20	23.81	410	0.08
46	16.26	33.56	5.59	335	30	19.23	33.67	5.29	23.96	396	0.13

BLACK DOUGLAS; August 17, 1959; 0907 GCT; 27°43'N, 115°33'W; sounding, 1240 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 30°. 120.45

1	21.66	33.85	4.99	444	0	(21.66)	(33.85)	(4.99)	(23.46)	(444)	(0.00)
9	21.62	33.87	5.30	441	10	21.62	33.87	5.31	23.49	441	0.04
29	19.58	33.75	5.43	398	20	21.00	33.84	5.39	23.63	427	0.09
37	18.08	33.71	5.72	365	30	19.30	33.74	5.50	24.00	392	0.13
48	16.35	33.69	5.68	327	50	16.20	33.68	5.65	24.71	324	0.20
60	14.74	33.64	5.03	296	75	13.58	33.72	4.34	25.30	268	0.27
80	13.24	33.72	4.18	262	100	11.73	33.76	3.64	25.69	231	0.34
95	12.12	33.73	3.74	240	150	10.42	34.10	2.27	26.20	183	0.44
111	11.27	33.84	3.44	217	200	10.20	34.35	1.16	26.43	161	0.53
135	10.72	33.98	2.46	197	250	9.34	34.36	1.01	26.58	146	0.61
158	10.36	34.16	2.18	177	300	9.23	34.46	0.60	26.68	138	0.68
189	10.48	34.34	1.15	166	400	8.14	34.48	0.33	26.87	120	0.82
212	9.86	34.36	1.17	155	500	7.06	34.49	0.22	27.03	104	0.93
252	9.31	34.36	1.00	146							
305	9.20	34.46	0.59	137							
387	8.28	34.48	0.36	122							
463	7.46	34.47	0.22	111							
529	6.77	34.51	0.22	98							

BLACK DOUGLAS; August 17, 1959; 1207 GCT; 27°30'N, 115°52.5'W; sounding, 2150 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 10°. 120.50

2	23.32	33.87	4.75	486	0	(23.32)	(33.87)	(4.75)	(23.01)	(486)	(0.00)
11	23.30	33.93	4.90	482	10	23.30	33.93	4.88	23.05	482	0.05
33	19.22	33.75	5.66	389	20	23.27	33.94	4.92	23.06	481	0.10
42	17.17	33.68	5.73	346	30	20.40	33.81	5.54	23.77	414	0.14
55	14.73	33.70	5.28	292	50	15.18	33.70	5.42	24.95	302	0.21
68	13.39	33.69	4.52	266	75	12.64	33.70	4.22	25.48	251	0.28
90	11.32	33.75	3.75	224	100	10.88	33.78	3.51	25.86	214	0.34
108	10.66	33.81	3.34	208	150	9.64	33.96	2.77	26.22	181	0.44
125	10.04	33.86	3.18	195	200	10.06	34.31	1.13	26.42	162	0.53
150	9.64	33.96	2.77	181	250	9.77	34.42	0.82	26.57	148	0.61
176	9.37	34.07	2.33	168	300	8.94	34.43	0.72	26.70	135	0.68
211	10.21	34.38	0.85	159	400	8.04	34.41	0.44	26.83	123	0.82
237	9.96	34.42	0.84	152	500	7.11	34.42	0.25	26.97	110	0.94
284	9.20	34.42	0.70	140							
341	8.40	34.43	0.75	127							
427	7.82	34.40	0.33	121							
505	7.05	34.42	0.25	109							
571	6.48	34.40	0.43	103							

a) Alternate value, 4.08 ml/L, not used in interpolation.

120.60 BLACK DOUGLAS; August 17, 1959; 1819 GCT; 27°05'N, 116°34'W; sounding, 1900 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 18°.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
2	22.02	33.80	4.85	456	0	(22.02)	(33.80)	(4.85)	(23.32)	(456)	(0.00)
11	21.98	33.77	4.78	458	10	21.99	33.78	4.82	23.31	457	0.05
28	21.88	33.77	4.78	455	20	21.93	33.77	4.78	23.32	456	0.09
36	18.82	33.64	5.39	388	30	20.85	33.72	4.96	23.58	432	0.14
48	16.46	33.57	5.39	338	50	16.22	33.57	5.43	24.61	334	0.21
60	14.92	33.57	5.62	305	75	14.30	33.74	4.34	25.17	280	0.29
80	14.00	33.75	4.11	274	100	12.10	33.72	3.87	25.59	240	0.36
95	12.38	33.71	3.94	246	150	10.44	34.00	2.03	26.11	191	0.46
111	11.37	33.71	3.48	228	200	10.23	34.26	1.36	26.36	168	0.56
126	10.89	33.80	2.89	213	250	9.94	34.43	0.74	26.54	150	0.64
147	10.46	33.96	2.11	194	300	9.58	34.49	0.41	26.65	140	0.71
172	10.38	34.11	1.76	181	400	8.00	34.40	0.35	26.83	123	0.85
193	10.30	34.23	1.42	171							
228	9.96	34.37	0.94	155							
267	9.92	34.47	0.59	147							
330	9.14	34.49	0.30	133							
393	8.12	34.41	0.33	124							
461	6.82	34.38	0.37	109							

120.70 BLACK DOUGLAS; August 17, 1959; 2354 GCT; 26°52.5'N, 117°10'W; sounding, 2000+ fm; wind, 320°; force 2; weather, overcast; sea, moderate; wire angle, 06°.

2	22.60	33.86	4.50	468	0	(22.60)	(33.86)	(4.50)	(23.20)	(468)	(0.00)
11	22.42	33.86	4.49	463	10	22.43	33.86	4.49	23.25	464	0.05
29	20.02	33.78	4.89	407	20	22.40	33.86	4.49	23.26	462	0.09
38	18.70	33.72	5.00	379	30	19.85	33.78	4.90	23.89	403	0.14
51	17.40	33.64	4.79	354	50	17.50	33.65	4.79	24.38	356	0.21
64	16.46	33.59	5.28	337	75	15.70	33.66	5.04	24.81	315	0.30
86	14.54	33.66	4.88	291	100	13.19	33.66	4.42	25.34	265	0.37
103	13.05	33.70	4.24	259	150	10.80	33.98	2.41	26.04	198	0.49
121	11.48	33.69	3.91	231	200	10.65	34.31	1.16	26.32	171	0.58
138	11.03	33.86	2.76	211	250	10.27	34.45	0.66	26.50	154	0.66
164	10.62	34.11	2.10	186	300	9.60	34.46	0.58	26.62	143	0.74
194	10.70	34.29	1.28	174	400	8.38	34.44	0.25	26.80	126	0.88
220	10.47	34.38	0.99	163	500	7.15	34.42	0.24	26.96	110	1.00
264	10.15	34.47	-	151							
313	9.42	34.45	0.56	141							
388	8.53	34.44	0.26	128							
462	7.58	34.42	0.24	116							
537	6.72	34.42	0.24	105							

120.80 BLACK DOUGLAS; August 18, 1959; 0445 GCT; 26°32.5'N, 117°48.5'W; sounding, 1900 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 10°.

2	23.48	33.91	4.77	488	0	(23.48)	(33.91)	(4.77)	(22.99)	(488)	(0.00)
11	23.45	33.93	4.68	486	10	23.45	33.93	4.68	23.01	487	0.05
29	19.19	33.80	5.41	384	20	22.10	33.89	4.92	23.36	453	0.10
38	18.58	33.79	5.23	370	30	19.11	33.80	5.41	24.10	383	0.14
50	18.24	33.84	5.43	359	50	18.24	33.84	5.43	24.34	359	0.21
63	17.62	33.84	5.41	345	75	17.00	33.85	5.41	24.65	330	0.30
85	16.20	33.87	5.33	311	100	13.45	33.69	4.73	25.31	267	0.37
102	13.10	33.68	4.61	262	150	11.23	34.06	2.13	26.02	200	0.49
118	11.64	33.71	4.26	233	200	11.42	34.46	0.68	26.30	173	0.58
135	11.05	33.85	3.05	212	250	11.12	34.55	0.54	26.42	162	0.67
161	11.40	34.20	1.53	192	300	10.40	34.54	0.49	26.55	150	0.75
191	11.46	34.43	0.78	176	400	8.92	34.46	0.38	26.73	133	0.90
217	11.36	34.51	0.60	168	500	7.60	34.44	0.27	26.91	115	1.03
259	11.02	34.56	0.51	159							
306	10.30	34.54	0.49	148							
380	9.20	34.47	0.41	136							
455	8.16	34.43	0.37	123							
531	7.29	34.46	0.21	109							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; August 16, 1959; 0924 GCT; 27°24'N, 114°39.5'W; sounding, 38 fm; wind, 290°, force 3; weather, clear; sea, slight; wire angle, 00°. 123.37

2	18.14	33.82	5.15	358	0	(18.14)	(33.82)	(5.15)	(24.35)	(358)	(0.00)
11	18.13	33.83	5.16	357	10	18.13	33.83	5.16	24.36	357	0.04
29	16.92	33.77	5.31	334	20	17.46	33.80	5.26	24.50	344	0.07
47	15.47	33.93	4.44	291	30	16.83	33.77	5.30	24.63	332	0.10

BLACK DOUGLAS; August 16, 1959; 0623 GCT; 27°14'N, 114°59'W; sounding, 800 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°. 123.42

2	24.06	34.03	4.57a)	496	0	(24.06)	(34.03)	(4.57)	(22.91)	(496)	(0.00)
10	24.04	34.02	4.64	496	10	24.04	34.02	4.64	22.91	496	0.05
28	18.68	33.67	5.30	382	20	20.20	33.73	5.24	23.76	415	0.10
37	17.60	33.64	5.33	359	30	18.18	33.66	5.32	24.22	371	0.13
50	16.88	33.59	5.40	346	50	16.88	33.59	5.40	24.48	346	0.21
63	15.78	33.66	5.20	317	75	14.38	33.61	5.00	25.07	291	0.29
84	13.53	33.63	4.63	273	100	12.31	33.74	3.66	25.58	242	0.35
101	12.23	33.75	3.60	240	150	10.65	34.02	2.47	26.09	193	0.46
119	11.40	33.75	3.33	225	200	10.36	34.34	1.02	26.40	164	0.56
136	10.70	33.81	3.02	209	250	9.58	34.37	0.82	26.56	149	0.64
161	10.58	34.15	1.91	182	300	9.19	34.42	0.55	26.66	139	0.71
191	10.39	34.29	1.22	168	400	7.92	34.45	0.49	26.88	119	0.84
217	10.24	34.40	0.82	158	500	7.02	34.50	0.16	27.04	103	0.96
260	9.42	34.37	0.82	147							
306	9.12	34.42	0.50	138							
380	8.06	34.42	0.57	123							
455	7.48	34.51	0.23	108							
531	6.70	34.47	0.16	101							

BLACK DOUGLAS; August 16, 1959; 0405 GCT; 27°08'N, 115°10.5'W; sounding, 1800 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 04°. 123.45

2	23.78	33.86	4.64	500	0	(23.78)	(33.86)	(4.64)	(22.87)	(500)	(0.00)
11	23.76	33.89	4.77	497	10	23.76	33.89	4.77	22.90	497	0.05
29	18.67	33.75	5.63	376	20	21.10	33.81	5.36	23.59	432	0.10
38	16.84	33.73	5.64	335	30	18.30	33.74	5.67	24.26	367	0.14
51	15.54	33.66	5.46	312	50	15.78	33.66	5.50	24.79	316	0.20
65	14.56	33.77	4.94	283	75	13.10	33.69	4.46	25.38	260	0.28
87	12.13	33.70	3.86	242	100	11.60	33.77	3.50	25.73	227	0.34
105	11.36	33.80	3.34	221	150	9.90	34.01	2.44	26.22	181	0.44
123	10.86	33.96	2.67	201	200	10.28	34.44	0.97	26.49	156	0.53
140	9.88	33.91	2.88	188	250	9.73	34.42	0.70	26.57	148	0.60
167	10.24	34.23	1.67	171	300	9.09	34.42	0.59	26.67	138	0.68
197	10.30	34.43	1.00	157	400	7.68	34.37	0.45	26.85	121	0.81
223	9.96	34.42	0.78	152	500	6.74	34.39	0.25	27.00	107	0.93
268	9.52	34.42	0.66	144							
316	8.88	34.42	0.57	135							
391	7.78	34.37	0.48	122							
467	7.03	34.39	0.24	111							
543	6.36	34.38	0.26	103							

a) These oxygen values were obtained from an average factor because of poor standards on this station.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

123.50 BLACK DOUGLAS; August 16, 1959; 0106 GCT; 27°00'N, 115°31.5'W; sounding, 2000+ fm; wind, 300°, force 4; weather, partly cloudy; sea, moderate; wire angle, 02°.

1	24.18	33.89	4.66	510	0	(24.18)	(33.89)	(4.66)	(22.77)	(510)	(0.00)
10	24.04	33.89	4.80	506	10	24.04	33.89	4.80	22.81	506	0.05
32	17.77	33.75	5.77	354	20	21.76	33.86	5.42	23.44	445	0.10
41	15.57	33.68	5.48	311	30	18.60	33.78	5.77	24.21	372	0.14
55	13.69	33.69	4.71	272	50	14.55	33.68	5.12	25.08	289	0.20
68	12.16	33.77	3.64	237	75	11.85	33.80	3.51	25.70	230	0.27
91	10.92	33.83	3.27	211	100	10.76	33.89	2.90	25.97	204	0.33
109	10.62	33.94	2.56	198	150	9.62	34.05	2.28	26.30	173	0.42
127	10.46	34.05	2.22	187	200	9.23	34.26	1.49	26.52	152	0.50
153	9.56	34.06	2.29	172	250	8.82	34.30	0.81	26.63	142	0.58
180	9.41	34.20	1.75	160	300	8.56	34.42	0.56	26.76	130	0.65
215	9.06	34.28	1.36	148	400	7.51	34.42	0.30	26.91	115	0.78
241	8.86	34.29	0.88	144	500	6.63	34.43	0.22	27.04	103	0.89
286	8.62	34.40	0.65	133							
343	8.26	34.45	0.40	123							
432	7.16	34.41	0.28	111							
513	6.52	34.43	0.21	101							
579	6.06	34.41	0.24	97							

123.60 BLACK DOUGLAS; August 15, 1959; 1905 GCT; 26°32'N, 116°13'W; sounding, 1900 fm; wind, 320°, force 3; weather, cloudy; sea, slight; wire angle, 03°.

2	24.24	33.96	4.68	506	0	(24.24)	(33.96)	(4.68)	(22.80)	(506)	(0.00)
11	24.06	33.94	4.71	503	10	24.06	33.94	4.71	22.84	503	0.05
29	20.49	33.82	5.83	416	20	22.75	33.88	5.32	23.18	470	0.10
37	16.44	33.73	5.29	326	30	19.50	33.80	5.74	24.00	392	0.14
51	13.98	33.67	4.43	279	50	14.08	33.67	4.50	25.16	281	0.21
64	12.60	33.74	3.68	248	75	11.37	33.81	3.14	25.80	220	0.27
86	10.64	33.86	-	205	100	10.62	34.01	2.22	26.09	193	0.33
103	10.62	34.04	2.13	191	150	10.14	34.24	1.40	26.36	168	0.42
121	10.50	34.19	1.73	177	200	9.91	34.43	0.81	26.55	149	0.50
139	10.23	34.18	1.67	174	250	9.36	34.44	0.66	26.65	140	0.57
165	10.06	34.33	-	160	300	8.57	34.43	0.51	26.76	129	0.64
195	9.94	34.43	0.83	150	400	7.03	34.35	0.50	26.92	114	0.77
221	9.73	34.43	0.76	147	500	6.30	34.35	0.36	27.02	105	0.88
264	9.15	34.45	0.61	137							
312	8.38	34.42	0.49	127							
387	7.13	34.34	0.52	116							
461	6.60	34.36	0.30	107							
536	6.08	34.34	0.46	103							

123.70 BLACK DOUGLAS; August 15, 1959; 1354 GCT; 26°16'N, 116°46'W; sounding, 2000+ fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 09°.

0	22.78	33.84	-	474	0	22.78	33.84		23.14	474	0.00
10	22.75	33.84	4.72	473	10	22.75	33.84	4.72	23.15	473	0.05
27	19.08	33.68	5.15	391	20	20.40	33.73	4.95	23.71	420	0.09
36	17.56	33.65	5.58	357	30	18.50	33.67	5.31	24.14	378	0.13
49	15.36	33.65	5.17	308	50	15.15	33.66	5.03	24.93	303	0.20
63	13.76	33.75	3.83	269	75	12.62	33.77	3.60	25.53	246	0.27
84	11.92	33.78	3.41	232	100	11.34	33.85		25.84	217	0.33
101	11.31	33.86	-	216	150	10.43	34.18	1.74	26.26	177	0.43
119	11.42	34.11	1.89	200	200	10.70	34.51	0.79	26.46	158	0.51
134	10.87	34.13	1.91	189	250	9.81	34.49	0.73	26.60	144	0.59
159	10.30	34.22	1.56	172	300	8.87	34.39	0.69	26.68	137	0.66
189	11.10	34.52	0.60	164	400	7.70	34.39	0.58	26.86	120	0.80
213	10.02	34.43	0.99	152	500	6.94	34.43	0.33	27.00	107	0.92
256	9.76	34.48	0.71	144							
302	8.84	34.39	0.69	136							
375	7.92	34.38	0.64	124							
449	7.33	34.41	0.43	113							
524	6.74	34.44	0.29	103							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; August 14, 1959; 1415 GCT; 26°55.5'N, 114°06'W; sounding, 40+ fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 01°. 127.34

1	22.12	34.16	4.55	434	0	(22.12)	(34.16)	(4.55)	(23.57)	(434)	(0.00)	
10	21.09a)	34.14	4.22	408	10	21.09	34.14	4.22	23.83	408	0.04	
28	16.79	34.25	2.53	296	20	16.97	34.24	2.67	24.97	300	0.08	
46	16.22	34.34	1.68	277	30	16.73	34.26	2.45	25.04	293	0.11	

BLACK DOUGLAS; August 14, 1959; 1715 GCT; 26°43.5'N, 114°29.5'W; sounding, 1800+ fm; wind, 280°, force 3; weather, overcast; sea, moderate; wire angle, 06°. 127.40

2	22.20	33.98	4.90	448	0	(22.20)	(33.98)	(4.90)	(23.41)	(448)	(0.00)	
11	21.96	33.97	5.07	442	10	21.97	33.97	5.07	23.46	443	0.04	
29	17.12	33.88	4.70	330	20	20.00	33.94	4.86	23.98	394	0.09	
38	15.70	33.81	5.08	304	30	17.02	33.87	4.74	24.67	329	0.12	
51	15.10	33.86	3.69	288	50	15.11	33.84	3.77	25.07	290	0.18	
64	14.01	33.88	3.14	265	75	13.06	33.90	2.36	25.55	245	0.25	
86	13.09	34.02	1.96	236	100	12.96	34.12	1.29	25.73	227	0.31	
104	12.94	34.13	1.26	225	150	11.08	34.10	2.01	26.08	194	0.42	
122	11.48	33.98	2.59	210	200	10.55	34.37	1.12	26.39	165	0.51	
139	11.40	34.07	2.11	202	250	9.92	34.45	0.79	26.56	149	0.59	
166	10.70	34.15	1.92	184	300	9.33	34.47	0.63	26.68	138	0.66	
197	10.58	34.36	1.15	166	400	8.07	34.47	0.40	26.87	119	0.80	
224	10.27	34.45	0.81	155	500	6.94	34.43	0.33	27.00	107	0.92	
268	9.70	34.44	0.78	146								
316	9.14	34.49	0.51	134								
392	8.18	34.47	0.41	120								
468	7.28	34.43	0.32	111								
544	6.48	34.42	0.37	102								

BLACK DOUGLAS; August 14, 1959; 2213 GCT; 26°23.5'N, 115°08'W; sounding, 2000 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 02°. 127.50

1	24.70	34.04	4.65	513	0	(24.70)	(34.04)	(4.65)	(22.73)	(513)	(0.00)	
10	24.41	34.04	4.86	505	10	24.41	34.04	4.86	22.81	505	0.05	
28	20.02	34.08	5.23	385	20	20.70	34.09	5.22	23.90	401	0.10	
37	19.14	33.93	5.16b)	374	30	19.82	34.05	5.22	24.10	382	0.14	
50	17.94	33.76	5.34	358	50	17.94	33.76	5.34	24.36	358	0.21	
63	16.47	33.86	4.86	317	75	14.68	33.79	4.29	25.12	285	0.29	
86	13.62	33.77	3.87	265	100	12.50	33.84	3.06	25.61	239	0.36	
103	12.39	33.85	2.96	236	150	11.05	34.16	1.83	26.14	189	0.46	
122	12.18	34.05	2.23	217	200	10.06	34.34	1.18	26.45	159	0.55	
139	11.44	34.13	1.91	198	250	9.82	34.48	0.61	26.60	145	0.63	
165	10.65	34.21	1.66	179	300	9.34	34.53	0.44	26.72	134	0.70	
196	10.10	34.33	1.24	161	400	7.90	34.49	0.30	26.91	116	0.84	
224	9.89	34.40	0.89	152	500	6.88	34.49	0.19	27.05	102	0.95	
267	9.74	34.52	0.49	141								
317	9.08	34.52	0.41	131								
392	8.00	34.49	0.31	117								
468	7.16	34.48	0.19	106								
544	6.56	34.48	0.21	98								

a) Alternate value, 20.90°C, not used in interpolation.
b) Mean value of 5.11 and 5.22 ml/L.

SIO

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5908

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

127.60 BLACK DOUGLAS; August 15, 1959; 0358 GCT; 26°03.5'N, 115°46.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 08°.

2	24.07	33.92	4.48	504	0	(24.07)	(33.92)	(4.48)	(22.82)	(504)	(0.00)
11	23.80	33.92	4.80	496	10	23.90	33.92	4.70	22.87	499	0.05
29	18.46	33.71	5.41	374	20	20.50	33.79	5.20	23.73	418	0.10
38	17.50	33.69	5.47	353	30	18.38	33.71	5.42	24.22	371	0.14
51	15.88	33.64	5.61	320	50	16.00	33.64	5.63	24.73	323	0.20
64	14.41	33.69	4.92	286	75	13.77	33.69	4.73	25.25	273	0.28
86	12.44	33.70	4.44	248	100	11.70	33.73	3.98	25.68	232	0.34
103	11.52	33.75	3.79	227	150	10.75	34.19	1.76	26.21	182	0.45
121	10.81	33.92	2.82	203	200	10.48	34.44	0.86	26.45	159	0.53
139	10.62	34.08	2.25	188	250	9.62	34.46	0.67	26.62	143	0.61
165	10.92	34.32	1.18	175	300	9.03	34.46	0.44	26.71	134	0.68
195	10.55	34.43	0.88	160	400	7.64	34.48	0.36	26.94	113	0.81
221	10.13	34.43	0.83	154	500	6.74	34.49	0.17	27.07	100	0.92
265	9.40	34.48	0.52	138							
314	8.83	34.45	0.40	132							
388	7.79	34.47	0.38	115							
463	7.02	34.49	0.23	104							
538	6.47	34.47	0.11	98							

127.70 BLACK DOUGLAS; August 15, 1959; 0900 GCT; 25°44'N, 116°24.5'W; sounding, 2000+ fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 03°.

2	24.26	34.45	4.43	471	0	(24.26)	(34.45)	(4.43)	(23.17)	(471)	(0.00)
11	24.31	34.47	4.31	471	10	24.30	34.47	4.32	23.17	471	0.05
29	20.82	34.25	5.01	393	20	23.50	34.41	4.48	23.36	453	0.09
38	20.12	34.30	5.03	371	30	20.73	34.25	5.01	24.01	391	0.14
51	19.33	34.20	5.01	359	50	19.41	34.21	5.02	24.33	360	0.21
65	18.37	34.14	4.98	340	75	17.59	34.11	4.89	24.72	324	0.30
87	16.48	34.05	4.74	304	100	15.02	33.92	4.55	25.16	282	0.37
105	14.22	33.86	4.47	270	150	11.04	33.95	2.96	25.97	205	0.50
122	12.30	33.75	4.12	241	200	10.33	34.31	1.52	26.38	166	0.59
140	11.18	33.82	3.56	216	250	9.39	34.33	1.32	26.55	149	0.67
167	10.84	34.09	1.97	191	300	9.04	34.44	0.68	26.69	136	0.74
198	10.38	34.31	-	166	400	7.74	34.44	0.30	26.89	117	0.88
224	9.78	34.30	1.49	158	500	6.95	34.45	0.22	27.02	105	0.99
268	9.20	34.37	1.07	143							
316	8.94	34.45	0.58	133							
390	7.81	34.43	0.31	118							
466	7.27	34.47	0.22	108							
542	6.53	34.42	0.22	102							

OBSERVED								COMP	INTERPOLATED				COMPUTED			
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m	

HUGH M. SMITH;[a] August 14, 1959; 0640 GCT;[b] 32°11.5'N, 117°17'W; sounding, 710 fm; wind, 030°, force 2; weather, cloudy; sea, slight; wire angle, 03°. 97.32

374	7.79	34.25	1.70	2.89	51.6	24.8	131
377	7.79	34.31	0.62	-	-	-	127
401	7.51	34.28	1.08	2.93	55.0	-	126
404	7.56	34.32	0.55	-	-	-	123
407	7.55	34.28	1.00	2.85	55.0	31.7	125
432	7.30	34.34	0.48	-	-	-	118
435	7.27	34.34	0.77	2.97	60.0	-	118
437	7.19	34.33	0.45	-	-	-	117
462	6.91	34.33	0.34	3.12c)	65.2	26.6	114
465	6.85	34.34	0.58	-	-	-	112
468	6.82	34.33	0.58	3.13	65.8	28.8	113
493	6.58	34.36	0.43	-	-	-	107
496	6.56	34.36	0.46	3.17	70.9	-	107
499	6.56	34.38	0.41	-	-	-	105
523	6.32	34.31u	0.41	3.25	74.2	28.6	
526	6.29	34.42	0.41	-	-	-	99
529	6.26	34.38	0.40	3.05	76.0	-	102
554	5.96	34.42	0.33	-	-	-	100
557	6.04	34.37	0.33	3.25	79.8	-	95
560	6.01	34.38	0.34	-	-	-	99
584	5.78	34.45	0.31	3.21	84.0	-	90
587	5.75	34.40	0.33	-	-	-	94
590	5.72	34.42	0.31	3.25	85.1	-	92

HUGH M. SMITH; August 16, 1959; 0208 GCT; 26°29'N, 113°29'W; sounding, 43 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 24°. 130.30

1	25.10	34.22	3.44	0.42d)	512	0	(25.10)	(34.22)	(3.44)	(22.74)	(512)	(0.00)		
9	25.08	34.27	3.42	0.56	507	10	25.06	34.27	3.42	22.80	507	0.05		
28	17.81	34.25	2.97	0.79	319	20	19.40	34.25	3.06	24.36	357	0.09		
46	16.13	34.34	1.91	1.25d)	274	30	17.76	34.26	2.93	24.79	317	0.13		
69	16.68	34.80	0.48	2.60d)	253	50	16.13	34.40	1.72	25.27	271	0.19		

HUGH M. SMITH; August 16, 1959; 0722 GCT; 26°19'N, 113°52'W; sounding, 170 fm; wind, 320°, force 4; weather, missing; sea, rough; wire angle, 09°. 130.35

0	21.82	34.02	4.91	0.38	436	0	21.82	34.02	4.91	23.54	436	0.00
10	21.60	34.04	4.97	0.38	428	10	21.60	34.04	4.97	23.62	428	0.04
29	17.98	33.94	5.50	0.50	346	20	19.94	34.00	5.23	24.03	389	0.08
49	15.77	33.85	5.26	0.72	302	30	17.90	33.94	5.50	24.50	344	0.12
73	14.74	34.42	1.36	2.43	240	50	15.53	33.86	4.94	25.00	297	0.18
98	14.48	34.56	0.88	2.60	224	75	14.74	34.44	1.30	25.62	238	0.25
122	14.32	34.60	0.60	2.80e)	217	100	14.47	34.56	0.86	25.78	223	0.31
161	13.58	34.60	0.46	2.47e)	203	150	13.83	34.61	0.48	25.94	207	0.42
200	12.80	34.56	0.41	2.80e)	191	200	12.80	34.56	0.41	26.11	191	0.52
250	11.35	34.64	0.41	3.00e)	159	250	11.35	34.64	0.41	26.46	159	0.61

a) Beginning with Line 130, the data were collected by the RV Hugh M. Smith for Tuna Oceanography Research (STOR) of Scripps Institution on Cruise TO-59-2 which extended to the Gulf of Tehuantepec. On the first part of the cruise stations of the CCOFI pattern off Baja California were occupied at the same time that other Scripps vessels were taking observations to the north on CCOFI Cruise 5908. For continuity the Cruise TO-59-2 data are presented in two sections in this volume: the first, stations of the CCOFI pattern, are included with CCOFI Cruise 5908; the second, data collected in the Gulf of Tehuantepec, are presented as Cruise TO-59-2 with other SIO special cruises which follow the CCOFI cruises.

b) Test cast.

c) Duplicate value, 3.04 µgm at/L.

d) Duplicate values: 1 m, 0.64; 46, 1.31; 69, 2.76 µg at/L.

e) Duplicate values: 122 m, 2.68; 161, 2.87; 200, 2.91; 250, 2.92 µg at/L.

S10
CCOFI
5908
TO-59-2

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^5 cm^3/g	m	°C	‰	ml/L	g/L	10^5 cm^3/g	dyn m

130.40 HUGH M. SMITH; August 16, 1959; 1300 GCT; 26°11'N, 114°10.5'W; sounding, 1300 fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 35°.

0	21.18	33.91	5.12	0.42	426	0	21.18	33.91	5.12	23.64	426	0.00
8	21.20	33.88	5.07	0.41	429	10	21.13	33.88	5.07	23.62	428	0.04
24	20.18	34.05	5.26	0.47a)	391	20	20.43	34.00	5.20	23.90	401	0.08
31	19.72	34.20	5.38	0.35	369	30	19.77	34.20	5.38	24.23	370	0.12
43	18.68	34.05	5.29	0.41a)	354	50	17.28	33.92	5.22	24.64	331	0.19
52	16.83	33.89	5.17	0.47	323	75	13.20	33.83	3.40	25.47	252	0.26
69	14.22	33.86	3.33	1.42	270	100	12.24	34.06	2.18	25.83	218	0.33
82	12.54	33.82	3.42	1.58	240	150	12.34	34.60	0.92	26.23	180	0.43
95	12.48	34.02	2.20	2.10	225	200	11.69	34.63	0.40	26.38	166	0.51
107	11.97b)	34.12	2.16	2.27a)	208	250	11.06	34.66	0.47	26.52	152	0.60
127	11.77b)	34.24	1.41	2.51a)	196	300	10.35	34.61	0.45	26.61	144	0.67
151	12.34b)	34.60	0.91	2.84	180	400	8.44	34.53	0.40	26.86	120	0.81
170	11.99b)	34.66	0.45	2.91a)	169							
204	11.64	34.63	0.40	2.89	165							
243	11.14	34.66	0.48	3.07a)	153							
304	10.28	34.60	0.45	2.83a)	143							
372	8.80	34.51	0.41	3.15	127							
448	7.86	34.57	0.38	2.61a)	109							

130.50 HUGH M. SMITH; August 16, 1959; 2045, 2115 GCT; 25°44.5'N, 114°42.5'W; sounding, 1950 fm; wind, 330°, force 3; weather, cloudy; sea, very rough; wire angle, 15°, 18°.

1	25.38	34.15	4.72	0.36c)	1.3	0.0	0.9	525	0	(25.38)	(34.15)	(4.72)	(22.60)	(525)	(0.00)
10	25.35	34.18	4.14	0.41	1.1	0.0	0.8	522	10	25.35	34.18	4.14	22.64	522	0.05
34	20.58	34.11	4.74	0.43	1.0	0.0	1.6	397	20	23.70	34.18	4.33	23.13	475	0.10
44	19.94	34.05	4.69	0.42	1.2	0.0	1.2	385	30	21.35	34.13	4.65	23.76	415	0.15
58	18.36	33.92	5.39	0.44	1.2	0.01	1.0	356	50	19.32	34.00	4.97	24.19	374	0.22
73	16.83	33.83	4.21	0.51	1.6	0.0	1.1	328	75	16.61	33.82	4.13	24.72	323	0.31
96	13.81	33.75	3.32	1.12	7.9	0.07	-	270	100	13.40	33.76	3.14	25.38	261	0.39
115	12.10	33.82	2.44	1.78	16.5	0.01	22.6	232	150	11.82	34.24	1.41	26.05	197	0.50
134	11.67	34.04	1.68	2.21c)	-	-	-	208	200	11.43	34.65	0.23	26.45	159	0.59
162	11.04	34.31	0.96	2.70	-	-	-	178	250	10.98	34.63	0.25	26.52	153	0.67
191	11.50	34.65	0.22	3.04	37.1	0.0	37.8	161	300	10.53	34.61	0.20	26.58	146	0.75
229	11.13	-	0.29	2.99c)	-	-	-		400	8.43	34.51	0.32	26.85	121	0.89
258	10.92	34.63	0.24	3.06	-	-	-	152	500	7.31	34.46	0.22	26.97	110	1.01
306	10.43	34.61	0.19	3.12	41.3	0.0	52.9	145	600	6.38	34.45	0.20	27.09	98	1.12
368	8.88	34.54	0.34	3.15	-	-	-	126							
465	7.64	34.47	0.26	3.21	60.7	0.0	-	114							
551	6.86	34.45	0.21	3.17c)	-	-	-	104							
625	6.13	34.45	0.19	3.41	79.4	0.0	-	95							

a) Duplicate values: 24 m, 0.40; 43, 0.33; 107, 2.21; 127, 2.58; 170, 3.03; 243, 2.95; 304, 3.07; 448, 3.21 μg at/L.
b) A much stronger temperature inversion was indicated by the bathythermograph observation obtained at this station one hour before the hydrographic cast.
c) Duplicate values: 1 m, 0.42; 134, 2.13; 229, 3.11; 551, 3.43 μg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 17, 1959; 0550 GCT; 25°35'N, 115°27.5'W; sounding, 2050 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°. 130.60

0	25.32	34.10	4.47	0.38	527	0	25.32	34.10	4.47	22.58	527	0.00
10	25.34	34.14	4.40	0.39	525	10	25.34	34.14	4.40	22.61	525	0.05
30	20.40	33.84	5.33	0.44	412	20	25.35	34.15	4.40	22.62	524	0.10
39	19.00	33.82	5.48	0.43	378	30	20.40	33.84	5.33	23.79	412	0.15
55	17.24	33.77	5.29	0.52	341	50	17.77	33.78	5.37	24.42	352	0.23
68	16.03	33.82	4.91	0.63	311	75	15.20	33.80	4.49	25.02	294	0.31
93	13.04	33.75	3.40	1.52	255	100	12.59	33.84	2.96	25.59	240	0.38
112	11.88	33.95	2.34	2.07	219	150	10.92	34.15	1.81	26.14	188	0.48
132	11.39	34.09	1.79	2.38a)	200	200	10.76	34.43	0.83	26.40	164	0.57
152	10.87	34.16	1.79	2.64	186	250	10.16	34.51	0.64	26.56	148	0.65
181	10.94	34.36	1.01	2.84	172	300	9.55	34.49	0.49	26.65	140	0.73
214	10.64	34.63u	0.72	3.04a)		400	8.35	34.46	0.32	26.82	124	0.87
245	10.22	34.51	0.64	3.04	149	500	7.16	34.42	0.20	26.96	110	0.99
293	9.62	34.49	0.52	3.07	141	600	6.16	34.43	0.22	27.10	97	1.10
347	9.02	34.47	0.29	3.18a)	134							
432	7.94	34.45	0.34	3.30	119							
515	7.00	34.42	0.19	3.34a)	108							
600	6.16	34.43	0.22	3.42a)	97							

HUGH M. SMITH; August 17, 1959; 1335 GCT; 25°08.5'N, 116°04'W; sounding, 2100 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 20°. 130.70

0	25.10	34.13	4.66	0.36	518	0	25.10	34.13	4.66	22.67	518	0.00
9	25.13	34.11	4.55	0.37	520	10	25.13	34.11	4.55	22.66	520	0.05
32	19.66	33.90	5.17	0.40	389	20	24.02	34.04	4.66	22.93	494	0.10
41	19.24	34.02	5.15	0.38	370	30	20.17	33.90	5.10	23.90	402	0.15
54	16.90	33.78	5.29	0.50	332	50	17.62	33.85	5.26	24.50	344	0.22
68	14.83	33.78	4.52	0.85	288	75	13.95	33.80	3.95	25.29	269	0.30
90	12.80	33.86	3.02	1.64	243	100	12.37	33.93	2.43	25.70	230	0.36
107	12.11	33.98	2.01	2.17	221	150	11.22	34.32	1.46	26.22	180	0.47
125	11.66	34.09	1.80	2.16	205	200	11.22	34.61	0.47	26.46	158	0.55
151	11.21	34.33	1.44	2.60	179	250	10.65	34.63	0.26	26.57	148	0.63
177	11.48	34.60	0.53	2.89b)	164	300	9.85	34.59	0.31	26.68	137	0.71
212	11.02	34.61	0.43	3.06b)	156	400	8.50	34.50	0.31	26.83	123	0.84
239	10.80	34.63	0.27	3.02	150	500	7.22	34.44	0.29	26.97	110	0.96
284	10.08	34.60	0.31	3.04	140	600	(6.38)	(34.46)	(0.17)	(27.10)	(97)	(1.07)
343	9.24	34.56	0.31	2.88	130							
436	8.02	34.47	0.31	3.30b)	119							
520	6.99	34.53u	0.27	3.35								
593	6.42	34.46	0.17	3.51b)	98							

HUGH M. SMITH; August 19, 1959; 0908 GCT; 26°05'N, 112°48.5'W; sounding, 41 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°. 133.25

0	25.06	34.16	4.81	0.51	515	0	25.06	34.16	4.81	22.71	515	0.00
10	24.84	34.16	4.90	0.51	509	10	24.84	34.16	4.90	22.78	509	0.05
29	17.24	33.81	5.84	0.40	338	20	18.28	33.83	5.81	24.33	360	0.09
49	15.57	34.00	4.16	1.20	288	30	17.12	33.81	5.81	24.60	335	0.13
						50	(15.49)	(34.01)		(25.12)	(285)	(0.19)

HUGH M. SMITH; August 19, 1959; 0555 GCT; 25°56'N, 113°07'W; sounding, 85 fm; wind, 290°, force 3; weather, partly cloudy; sea, rough; wire angle, 11°. 133.30

1	24.88	34.24	4.64	0.37c)	504	0	(24.88)	(34.24)	(4.64)	(22.83)	(504)	(0.00)
10	24.89	34.22	4.57	0.54	505	10	24.89	34.22	4.57	22.81	505	0.05
30	16.22	33.80	5.48	0.58	316	20	23.90	34.16	4.66	23.05	482	0.10
49	15.30	34.29	2.46	1.72c)	260	30	16.22	33.80	5.48	24.79	316	0.14
73	15.24	34.67	1.12	2.69c)	232	50	15.30	34.30	2.44	25.39	260	0.20
98	14.49	34.81	0.52	3.31c)	206	75	15.23	34.70	1.04	25.71	229	0.26
122	13.84	34.70	0.62	2.66c)	201	100	14.35	34.79	0.55	25.98	204	0.31

a) Duplicate values: 132 m, 2.46; 214, 2.92; 347, 3.26; 515, 3.42; 600, 3.34 µg at/L.
b) Duplicate values: 177 m, 2.76; 212, 2.88; 436, 3.20; 593, 3.37 µg at/L.
c) Duplicate values: 1 m, 0.50; 49, 1.96; 73, 2.32; 98, 3.09; 122, 2.91 µg at/L.

SIO

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5908
TO-59-2

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

133.40 HUGH M. SMITH; August 18, 1959; 1925 GCT; 25°35'N, 113°44'W; sounding, 1495 fm; wind, 330°, force 4; weather, clear; sea, rough; wire angle, 26°.

1	22.66	33.96	4.88	0.41	1.7	0.0	0.3	462	0	(22.66)	(33.96)	(4.88)	(23.26)	(462)	(0.00)
9	22.64	33.93	4.64	0.45	1.7	0.0	0.3	464	10	22.48	33.93	4.62	23.30	459	0.05
27	19.92	34.11	5.24	0.40	-	-	-	380	20	20.38	34.09	5.16	23.99	393	0.09
35	19.21	34.04	5.15	0.47a)	1.2	0.0	0.3	368	30	19.70	34.09	5.22	24.17	376	0.13
49	18.12	33.94	5.22	0.43	-	0.0	0.2	349	50	18.08	33.94	5.22	24.47	347	0.20
61	16.30	33.95	5.00	0.82a)	2.2	0.0	0.4	307	75	14.37	33.86	4.34	25.25	273	0.28
82	13.79	33.84	4.07	1.15	7.7	0.0	10.2	263	100	13.08	34.18	1.34	25.75	225	0.34
97	13.28	34.20	1.46	2.49	25.2	Trace	28.0	227	150	12.84	34.64	0.27	26.17	186	0.45
113	13.49	34.36	0.91	2.55a)	30.2	Trace	-	219	200	11.43	34.60	0.13	26.40	164	0.54
130	13.16	34.47	0.67	3.02a)	-	0.0	-	204	250	10.28	34.54	0.65	26.56	148	0.62
153	12.78	34.65	0.22	2.83a)	33.5	0.0	-	184	300	9.82	34.55	0.62	26.65	140	0.69
181	11.26b)	34.48	1.65	2.63a)	-	-	-	169	400	8.54	34.52	0.43	26.84	122	0.83
204	11.42	34.61	0.12	3.10a)	-	-	-	163	500	7.04	34.51	0.37	27.05	102	0.94
244	10.38	34.54	0.65	3.10	-	0.0	34.0	149							
291	9.90	34.54	0.64	2.93	-	-	-	142							
359	9.18	34.53	0.43	3.27a)	46.0	0.0	34.4	131							
438	7.92	34.51	0.43	3.18	-	-	-	114							
517	6.80	34.51	0.36	3.22	69.4	0.0	-	99							

133.50 HUGH M. SMITH; August 18, 1959; 1250 GCT; 25°21'N, 114°26.5'W; sounding, 1300 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 15°.

1	24.82	34.13	4.54	0.40				510	0	(24.82)	(34.13)	(4.54)	(22.76)	(510)	(0.00)
10	24.85	34.11	4.52	0.39				512	10	24.85	34.11	4.52	22.74	512	0.05
29	20.82	34.04	5.14	0.38				408	20	22.20	34.07	4.96	23.47	442	0.10
38	20.10	34.00	4.95	0.41				392	30	20.73	34.04	5.13	23.86	406	0.14
53	19.52	34.04	5.02	0.42c)				375	50	19.67	34.03	5.01	24.13	379	0.22
66	18.63	33.98	4.98	0.44				358	75	18.00	33.94	4.90	24.48	346	0.31
90	16.88	33.89	4.84	0.75c)				324	100	15.50	33.84	4.43	24.98	298	0.39
108	14.38	33.80	3.92	1.00c)				277	150	11.85	34.04	2.27	25.90	212	0.52
127	12.57	33.76	3.54	1.38				245	200	11.00	34.42	1.13	26.34	169	0.62
145	11.96	33.99	2.44	2.16c)				217	250	10.60	34.56	0.60	26.53	152	0.70
173	11.50	34.25	1.61	2.58c)				190	300	9.69	34.53	0.55	26.66	139	0.78
205	10.91	34.44	1.07	2.77				166	400	8.42	34.54	0.34	26.86	120	0.91
233	10.8d)	34.56	0.60	2.86c)				155	500	7.29	34.49	0.43	27.00	107	1.03
280	9.84	34.49	0.65	3.10c)				145							
341	9.34	34.61	0.34	3.18c)				128							
413	8.23	34.52	0.34	3.38c)				118							
494	7.32	34.49	0.43	3.12c)				107							
577	6.78	34.47	0.27	3.34c)				101							

a) Duplicate values: 35 m, 0.34; 61, 0.53; 113, 2.71; 130, 2.64; 153, 2.62; 181, 2.87; 204, 3.30; 359, 3.18 µg at/L.

b) Mean value of 11.21 and 11.32°C.

c) Duplicate values: 53 m, 0.36; 90, 0.51; 108, 0.94; 145, 2.05; 173, 2.47; 233, 2.79; 280, 3.18; 341, 2.86; 413, 3.18; 494, 3.30; 577, 3.46 µg at/L.

d) Both protected thermometers at this level malfunctioned. Since an acceptable depth was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 18, 1959; 0432 GCT; 24°55'N, 115°02'W; sounding, 1970 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 16°. 133.60

1	25.16	34.05	3.97	0.41				526	0	(25.16)	(34.05)	(3.97)	(22.59)	(526)	(0.00)
10	25.17	34.11	4.09	0.42a)				521	10	25.17	34.11	4.09	22.65	521	0.05
30	20.86	34.07	4.30	0.42				407	20	24.60	34.13	4.13	22.83	504	0.10
39	19.90	33.98	4.33	0.42				389	30	20.86	34.07	4.30	23.84	407	0.15
53	18.60	33.91	4.40	0.43				362	50	18.83	33.92	4.39	24.26	368	0.23
68	17.90	33.96	4.47	0.46a)				342	75	17.84	33.99	4.44	24.56	339	0.31
92	16.84	33.96	4.17	0.54				318	100	16.35	33.94	4.10	24.87	309	0.40
112	14.36	33.86	3.80	0.92				273	150	11.31	33.85	3.10	25.85	216	0.53
130	12.80	33.82	3.08	1.55				246	200	11.16	34.41	1.08	26.31	172	0.63
149	11.32	33.84	3.14	1.93				217	250	10.35	34.54	0.90	26.56	149	0.71
179	11.44	34.27	1.49	2.71a)				188	300	9.38	34.50	0.62	26.69	136	0.78
212	10.98	34.47	0.93	2.77				165	400	8.12	34.49	0.48	26.88	118	0.92
242	10.50	34.54	0.93	2.85				151	500	7.15	34.51	0.37	27.03	104	1.03
289	9.58	34.52	0.64	2.59a)				138	600	(6.17)	(34.52)	(0.36)	(27.17)	(90)	(1.14)
343	8.67	34.44	0.53	2.31				130							
426	7.87	34.51	0.45	2.53a)				113							
509	7.06	34.51	0.36	3.15				102							
593	6.24	34.52	0.36	3.43				91							

HUGH M. SMITH; August 17, 1959; 2047 GCT; 24°31'N, 115°45'W; sounding, 2100 fm; wind, 360°, force 4; weather, cloudy; sea, rough; wire angle, 16°. 133.70

1	25.34	34.11	4.64	0.42				527	0	(25.34)	(34.11)	(4.64)	(22.58)	(527)	(0.00)
10	25.33	34.14	4.60	0.42				524	10	25.33	34.14	4.60	22.61	524	0.05
29	21.57	33.92	5.39	0.46b)				436	20	25.32	34.19	4.61	22.65	521	0.10
39	18.00	33.89	5.60	0.68				350	30	21.40	33.92	5.40	23.58	432	0.15
52	15.81	33.82	4.86	0.82				306	50	15.98	33.82	4.94	24.87	309	0.23
66	14.13	33.82	3.92	1.63b)				271	75	13.02	33.86	3.19	25.52	247	0.30
89	12.26	33.96	2.51	2.09				225	100	11.98	34.02	2.43	25.86	215	0.36
107	11.36	34.00	2.34	2.54b)				206	150	11.27	34.47	1.00	26.33	170	0.45
126	11.62	34.27	1.37	2.41b)				191	200	10.69	34.57	0.67	26.51	153	0.54
144	11.33	34.47	1.10	2.77b)				171	250	9.88	34.51	0.50	26.61	144	0.61
172	11.04	34.45	0.79	2.85				168	300	9.42	34.52	0.38	26.70	135	0.68
206	10.60	34.58	0.64	3.12b)				150	400	8.06	34.47	0.37	26.86	120	0.82
233	10.03	34.51	0.58	3.01b)				147	500	6.92	34.43	0.25	27.01	106	0.94
281	9.60	34.52	0.38	3.15				138							
335	9.02	34.53	0.40	3.18b)				129							
417	7.82	34.45	0.34	3.28				117							
502	6.90	34.43	0.24	3.73b)				106							

HUGH M. SMITH; August 19, 1959; 1800 GCT; 25°34.5'N, 113°22.5'W; sounding, 92 fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°. 134.36

0	22.86	33.94	5.00	0.43	1.7	0.01	1.2	469	0	22.86	33.94	5.00	23.19	469	0.00
9	21.82	33.94	5.19	0.44	1.8	0.0	0.4	441	10	21.30	33.94	5.23	23.63	427	0.04
29	18.32	33.95	5.48	0.43c)	1.2	0.0	0.4	353	20	19.63	33.95	5.39	24.08	384	0.08
49	16.64	33.91	5.14	0.53	1.9	0.0	0.4	317	30	18.30	33.95	5.47	24.42	352	0.12
73	14.34	33.85	4.26	1.01	6.2	0.09	9.0	273	50	16.63	33.91	5.13	24.79	317	0.19
98	13.58	34.11	2.23	2.09	18.8	0.03	23.4	238	75	14.30	33.85	4.23	25.26	272	0.26
123	12.48	34.47	1.19	2.63	29.5	0.01	34.0	192	100	13.38	34.16	1.98	25.69	231	0.33

HUGH M. SMITH; August 22, 1959; 1343 GCT; 25°32.5'N, 112°22.5'W; sounding, 41 fm; wind, 210°, force 2; weather, partly cloudy; sea, rough; wire angle, 00°. 137.23

1	25.38	34.11	4.57	0.45				528	0	(25.38)	(34.11)	(4.57)	(22.57)	(528)	(0.00)
11	25.38	34.13	4.64	0.47				526	10	25.38	34.13	4.64	22.59	526	0.05
31	22.79	34.18	5.03	0.53				450	20	24.20	34.16	4.87	22.97	490	0.10
51	19.98	34.41	4.02	1.06				360	30	22.87	34.18	5.03	23.37	452	0.15
									50	20.02	34.40	4.05	24.32	362	0.23

a) Duplicate values: 10 m, 0.34; 68, 0.29; 179, 2.56; 289, 2.91; 426, 2.44 μg at/L.
b) Duplicate values: 29 m, 0.52; 66, 1.19; 107, 2.22; 126, 2.54; 144, 2.89; 206, 2.85; 233, 3.12; 335, 3.12; 502, 3.24 μg at/L.
c) Duplicate value, 0.53 μg at/L.

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OBSERVED									INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

137.30 HUGH M. SMITH; August 22, 1959; 1751 GCT; 25°22'N, 112°47.5'W; sounding, 195 fm; wind, 250°, force 2; weather, clear; sea, rough; wire angle, 08°.

1	26.78	34.42	4.47	0.43	547	0	(26.78)	(34.42)	(4.47)	(22.38)	(547)	(0.00)
11	26.69	34.42	4.47	0.41	544	10	26.69	34.42	4.47	22.41	544	0.05
31	20.68	33.90	5.34	0.39	414	20	26.00	34.36	4.54	22.57	528	0.11
51	18.09	34.49	2.90	1.59a)	308	30	21.30	33.94	5.33	23.63	427	0.16
75	15.98	34.52	1.91	2.20a)	258	50	18.22	34.46	3.03	24.83	313	0.23
99	14.70	34.56	1.46	2.41	228	75	15.98	34.52	1.91	25.40	258	0.30
123	14.50	34.79	0.60	2.79	207	100	14.67	34.56	1.43	25.73	227	0.36
163	13.16	34.74	0.34	2.86	184	150	13.60	34.77	0.38	26.11	191	0.47
201	12.46	34.69	0.31	2.72a)	176	200	12.48	34.69	0.31	26.28	176	0.56
250	11.70	34.69	0.38	3.52	161	250	11.70	34.69	0.38	26.43	161	0.65
301	10.99	34.65	0.21	3.52	152	300	11.00	34.65	0.21	26.53	152	0.73

137.35 HUGH M. SMITH; August 22, 1959; 2100 GCT; 25°14'N, 113°03'W; sounding, 275 fm; wind, 250°, force 2; weather, partly cloudy; sea, moderate; wire angle, 09°.

1	26.62	34.36	4.54	0.49	547	0	(26.62)	(34.36)	(4.54)	(22.38)	(547)	(0.00)
11	26.32	34.34	4.43	0.52	539	10	26.33	34.34	4.44	22.46	539	0.05
30	21.06	34.15	5.29	0.48b)	406	20	26.10	34.33	4.45	22.52	534	0.11
50	16.70	34.01	4.50	0.87	311	30	21.06	34.15	5.29	23.85	406	0.16
75	15.22	34.14	2.97	1.68b)	270	50	16.70	34.01	4.50	24.85	311	0.23
99	15.70	34.88	0.81	2.74b)	226	75	15.22	34.14	2.97	25.28	270	0.30
123	14.69	34.87	0.60	2.71b)	205	100	15.69	34.88	0.80	25.75	225	0.36
163	13.86	34.90	0.50	2.93	186	150	14.12	34.89	0.51	26.10	192	0.47
202	13.00	34.78	0.48	2.81b)	178	200	13.06	34.79	0.49	26.24	179	0.56
251	11.78	34.68	0.26	2.96	163	250	11.79	34.68	0.26	26.41	163	0.65
301	11.12	34.67	0.36	2.94	152	300	11.13	34.67	0.36	26.52	153	0.73
404	9.04	34.56	-	3.12	127	400	9.16	34.56		26.78	128	0.88

137.40 HUGH M. SMITH; August 20, 1959; 0843 GCT; 25°00'N, 113°24'W; sounding, 1700 fm; wind, 360°, force 3; weather, partly cloudy; sea, rough; wire angle, 04°.

0	23.79	34.13	4.69	0.42	481	0	23.79	34.13	4.69	23.06	481	0.00
10	23.67	34.13	4.90	0.36	477	10	23.67	34.13	4.90	23.11	477	0.05
30	20.03	34.12	5.22	0.35	382	20	21.28	34.12	5.18	23.77	414	0.09
40	19.40	34.14	5.24	0.38	365	30	20.03	34.12	5.22	24.10	382	0.13
54	17.90	33.93	5.15	0.44	344	50	18.37	33.99	5.19	24.43	351	0.20
69	15.94	33.91	4.76	0.74	302	75	14.99	33.98	3.24	25.20	277	0.28
94	16.14	34.78	1.08	2.54	243	100	16.06	34.85	0.97	25.63	236	0.35
114	15.51	34.93	0.84	2.77c)	218	150	13.58	34.87	0.56	26.20	183	0.46
133	14.14	34.88	0.57	2.83c)	193	200	11.64	34.65	0.51	26.41	163	0.54
153	13.44	34.86	0.57	2.99c)	181	250	11.08	34.70	0.26	26.55	150	0.62
182	11.80	34.58	0.81	2.52c)	171	300	10.38	34.66	0.23	26.65	140	0.70
217	11.66	34.73	0.29	3.05c)	158	400	8.69	34.55	0.47	26.84	122	0.84
247	11.13	34.70	0.27	2.91	150	500	7.28	34.49	0.35	27.00	106	0.95
296	10.47	34.67	0.21	3.27c)	141	600	6.16	34.47	0.40	27.14	94	1.06
350	9.30	34.52	0.45	3.07	134							
434	8.26	34.57	0.45	3.37	115							
518	7.02	34.48	0.34	3.43c)	104							
602	6.14	34.47	0.40	3.47c)	94							

a) Duplicate values: 51 m, 1.53; 75, 2.06; 201, 2.91 µg at/L.
b) Duplicate values: 30 m, 0.81; 75, 1.60; 99, 2.64; 123, 2.79; 202, 2.71 µg at/L.
c) Duplicate values: 114 m, 2.70; 133, 2.73; 153, 3.27; 182, 2.72; 217, 2.92; 296, 3.05; 518, 3.23; 602, 3.96 µg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED			
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m	

HUGH M. SMITH; August 20, 1959; 1605 GCT; 24°40'N, 114°02'W; sounding, 2050 fm; wind, 020°, force 3; weather, cloudy; sea, high; wire angle, 08°. 137.50

2	23.04	33.99a)	4.60	0.44	470	0	(23.04)	(33.99)	(4.60)	(23.18)	(470)	(0.00)
11	22.96	33.96	4.50	0.38b)	470	10	22.97	33.96	4.50	23.18	470	0.05
30	19.72	34.00	5.02	0.47	383	20	22.30	33.96	4.60	23.37	452	0.09
40	19.42	34.05	4.83	0.45	372	30	19.72	34.00	5.02	24.09	383	0.13
56	18.29	34.00	4.76	0.53b)	348	50	18.92	34.03	4.77	24.33	361	0.21
69	16.62	33.91	4.64	0.59	317	75	15.86	33.90	4.49	24.96	301	0.29
94	13.70	33.91	3.26	1.43	256	100	13.32	33.94	2.77	25.53	246	0.36
113	12.94	34.13	1.51	2.32	225	150	12.90	34.51	0.45	26.06	196	0.47
133	12.91	34.43	0.43	2.83b)	203	200	12.16	34.69	0.38	26.34	170	0.56
152	12.88	34.53	0.45	3.12b)	195	250	11.80	34.79	0.22	26.49	155	0.65
180	12.42	34.68	0.33	3.00	176	300	10.97	34.71	0.26	26.58	147	0.73
216	12.00	34.70	0.40	2.98	166	400	9.22	34.59	0.33	26.78	128	0.87
245	11.86	34.80	0.21	3.07	156	500	7.49	34.49	0.36	26.97	109	0.99
294	11.04	34.72	0.26	3.06	148	600	(6.64)	(34.51)	(0.21)	(27.10)	(97)	(1.10)
348	10.16	34.65	0.29	3.14b)	138							
516	7.28	34.49	0.27	3.31b)	107							
599	6.66	34.51	0.21	3.61b)	97							

HUGH M. SMITH; August 20, 1959; 1904 GCT; 24°29'N, 114°22'W; sounding, 2070 fm; wind, 020°, force 4; weather, partly cloudy; sea, very rough; wire angle, 02°. 137.55

1	24.02	34.02	4.76	0.39c)	496	0	(24.02)	(34.02)	(4.76)	(22.91)	(496)	(0.00)
10	23.86	34.04	4.76	0.37	489	10	23.86	34.04	4.76	22.98	489	0.05
30	20.82	34.05	5.26	0.35	408	20	23.80	34.04	4.76	23.00	488	0.10
40	19.38	34.00	-	-	374	30	20.82	34.05	5.26	23.84	408	0.14
55	17.65	33.86	5.29	0.46c)	344	50	18.00	33.88	5.30	24.44	350	0.22
70	16.18	33.87	4.93	0.90c)	310	75	15.70	33.88	4.64	24.97	299	0.30
94	13.48	33.94	2.59	1.81	249	100	13.12	34.00	2.16	25.62	238	0.37
114	12.92	34.25	1.55	2.42	216	150	12.68	34.68	0.49	26.23	180	0.47
133	12.68	34.52	0.88	2.57	192	200	12.14	34.76	0.33	26.40	164	0.56
154	12.68	34.70	0.45	3.06c)	178	250	11.37	34.79	0.21	26.57	148	0.64
183	12.38	34.72	0.33	3.06	172	300	10.86	34.75	0.15	26.62	143	0.72
217	11.88	34.79	0.33	3.22c)	157	400	9.13	34.62	0.19	26.82	124	0.86
246	11.43	34.80	0.22	3.12c)	149	500	7.72	34.57	0.16	27.00	107	0.98
305	10.80	34.74	0.14	3.27c)	142	600	6.64	34.49	0.24	27.08	99	1.08
350	10.14	34.70	0.12	3.07c)	134							
433	8.57	34.59	0.21	3.33	117							
517	7.53	34.56	0.15	3.41	105							
601	6.63	34.49	0.24	3.39	99							

HUGH M. SMITH; August 22, 1959; 0717 GCT; 24°45'N, 112°24'W; sounding, 60 fm; wind, 230°, force 2; weather, clear; sea, rough; wire angle, 00°. 140.30

1	26.71	34.56	4.54	0.53	535	0	(26.71)	(34.56)	(4.54)	(22.50)	(535)	(0.00)
11	25.74	34.37	4.57	0.46	520	10	25.82	34.38	4.57	22.64	522	0.05
31	22.50	34.43	4.67	0.66	424	20	23.50	34.41	4.68	23.37	452	0.10
51	20.78	34.41	4.19	0.88	380	30	22.52	34.43	4.67	23.66	424	0.14
75	16.68	34.58	1.89	2.02d)	269	50	20.85	34.41	4.22	24.10	382	0.23
						75	16.68	34.58	1.89	25.29	269	0.31

a) Salinity bottle numbers were not recorded on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be listed in correct order.
b) Duplicate values: 11 m, 0.30; 56, 0.46; 133, 2.71; 152, 3.41; 348, 3.06; 516, 3.37; 599, 3.37 μg at/L.
c) Duplicate values: 1 m, 0.30; 55, 0.55; 70, 0.62; 154, 2.86; 217, 3.06; 246, 2.73; 305, 3.33; 350, 3.13 μg at/L.
d) Duplicate value, 2.12 μg at/L.

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OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

140.35 HUGH M. SMITH; August 23, 1959; 0425 GCT; 24°36'N, 112°39'W; sounding, 385 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 04°.

1	26.95	34.66	4.33	0.61a)	535	0	(26.95)	(34.66)	(4.33)	(22.50)	(535)	(0.00)
11	26.94	34.61	4.47	0.59	538	10	26.94	34.61	4.46	22.47	538	0.05
30	22.72	34.33	5.02	0.57	437	20	26.00	34.54	4.64	22.71	515	0.11
40	19.72	34.10	4.90	0.31a)	375	30	22.72	34.33	5.02	23.53	437	0.15
55	17.57	33.97	5.03	0.64a)	334	50	18.10	33.99	5.01	24.50	344	0.23
70	15.70	33.96	3.95	1.16	293	75	15.61	34.04	3.69	25.11	286	0.31
94	14.68	34.40	1.51	2.36a)	240	100	14.85	34.57	1.17	25.69	231	0.38
114	14.86	34.79	0.72	2.82	215	150	13.64	34.86	0.43	26.18	185	0.48
134	14.22	34.90	0.55	2.67a)	194	200	12.28	34.77	0.30	26.38	166	0.57
154	13.50	34.85	0.40	3.00	183	250	11.37	34.69	0.19	26.49	155	0.65
183	12.74	34.80	0.26	3.00	172	300	10.82	34.67	0.23	26.56	148	0.73
218	11.82	34.74	0.31	3.00	160	400	8.85	34.54	0.28	26.81	125	0.87
247	11.40	34.70	0.19	3.00	156	500	7.12	34.50	0.23	27.03	104	0.99
297	10.87	34.67	0.22	3.00	148	600	6.39	34.45	0.20	27.09	98	1.10
351	9.88	34.60	0.29	3.05	137							
435	8.14	34.52	0.26	3.29a)	116							
519	6.92	34.49	0.21	3.40	102							
605	6.36	34.45	0.19	3.40	98							

140.40 HUGH M. SMITH; August 23, 1959; 0845 GCT; 24°25.5'N, 113°02.5'W; sounding, 2000 fm; wind, 320°, force 3; weather, partly cloudy; sea, slight; wire angle, 03°.

1	25.66	33.93	4.60	0.14	549	0	(25.66)	(33.93)	(4.60)	(22.36)	(549)	(0.00)
11	25.64	33.96	4.64	0.16	546	10	25.64	33.96	4.64	22.38	546	0.05
30	19.32	33.98	5.45	0.21	374	20	24.83	33.97	4.84	22.64	522	0.11
40	16.16	33.76	5.14	0.41	317	30	19.32	33.98	5.45	24.18	374	0.15
55	14.38	33.78	4.23	0.91	279	50	14.84	33.77	4.60	25.08	289	0.22
70	13.20	33.82	3.14	1.36	253	75	13.07	33.85	2.95	25.51	248	0.29
94	12.68	34.21	1.58	2.12b)	214	100	12.59	34.25	1.46	25.92	210	0.34
114	12.34	34.33	1.29	2.41	200	150	12.18	34.57	0.60	26.25	178	0.44
134	12.42	34.34u	0.79	2.69b)		200	11.29	34.61	0.49	26.44	160	0.53
153	12.10	34.58	0.60	2.67b)	176	250	10.28	34.58	0.45	26.60	145	0.61
183	11.58	34.60	0.58	2.69	165	300	9.76	34.55	0.31	26.67	138	0.68
217	10.93	34.61	0.41	2.82b)	154	400	8.26	34.50	0.41	26.86	120	0.82
247	10.32	34.58	0.46	2.66	145	500	7.09	34.50	0.36	27.03	104	0.93
296	9.82	34.56	0.31	2.93b)	140	600	6.17	34.44	0.34	27.11	96	1.04
350	9.03	34.52	0.38	2.83b)	130							
434	7.80	34.50	0.41	3.06b)	113							
518	6.90	34.49	0.34	3.32b)	102							
603	6.14	34.44	0.34	3.21	96							

a) Duplicate values: 1 m, 0.53; 40, 0.55; 55, 0.53; 94, 2.28; 134, 3.03; 435, 3.22 μg at/L.
b) Duplicate values: 94 m, 2.28; 134, 2.55; 153, 2.59; 217, 2.70; 296, 2.78; 350, 2.93; 434, 3.14; 518, 2.88 μg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 23, 1959; 1655 GCT; 24°08'N, 113°42.5'W; sounding, 1800 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 18°. 140.50

1	23.94	34.03	4.60	0.17a)	1.7	0.0	0.2	492	0	(23.94)	(34.03)	(4.60)	(22.95)	(492)	(0.00)
10	23.90	34.04	4.50	0.26a)	1.8	0.0	0.4	490	10	23.90	34.04	4.50	22.97	490	0.05
28	19.86	33.98	4.97	0.31a)	-	-	-	388	20	23.00	34.03	4.58	23.22	466	0.10
38	19.25	33.97	5.10	0.22	1.1	0.0	0.4	374	30	19.73	33.98	5.00	24.07	385	0.14
52	17.52	33.91	4.64	0.31	1.4	0.0	0.3	337	50	17.92	33.93	4.76	24.49	345	0.21
65	14.29	33.80	3.76	1.08	6.7	0.08	7.6	276	75	12.98	33.91	2.48	25.58	242	0.29
88	12.70	34.04	1.82	2.00	21.8	0.02	22.4	227	100	12.78	34.22	1.24	25.86	215	0.34
106	12.81	34.31	0.91	2.52a)	28.2	0.0	26.7	210	150	12.69	34.59	0.38	26.16	187	0.45
124	12.86	34.48	0.74	2.73a)	31.5	Trace	26.2	198	200	11.88	34.66	0.41	26.37	166	0.54
142	12.76	34.57	0.38	2.58a)	-	-	-	189	250	11.07	34.64	0.38	26.50	154	0.62
169	12.42	34.62	0.38	2.86a)	34.8	0.01	-	180	300	10.23	34.56	0.45	26.60	145	0.70
200	11.88	34.66	0.41	2.90a)	-	-	-	166	400	8.95	34.56	0.21	26.80	125	0.84
227	11.55	34.67	0.21	2.90a)	-	-	-	160	500	7.55	34.50	0.20	26.97	110	0.96
273	10.56	34.69u	0.48	2.82	38.3	0.0	-								
324	9.96	34.56	0.34	2.75	-	-	-	141							
403	8.90	34.56	0.21	3.01a)	50.9	0.0	30.6	125							
484	7.74	34.51	0.21	2.87a)	-	-	-	111							
567	6.99	34.49	0.17	3.29	69.5	0.0	30.9	103							

HUGH M. SMITH; August 24, 1959; 0250 GCT; 23°44.5'N, 114°22'W; sounding, 2100 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 06°. 140.60

1	26.06	34.28	4.43	0.26				536	0	(26.06)	(34.28)	(4.43)	(22.49)	(536)	(0.00)
11	26.06	34.31	4.47	0.34				534	10	26.06	34.31	4.47	22.51	534	0.05
30	22.72	33.98	4.81	0.28				462	20	25.83	34.29	4.52	22.57	528	0.11
40	17.82	33.80	5.15	0.35b)				352	30	22.72	33.98	4.81	23.26	462	0.16
55	15.76	33.87	4.26	0.52				301	50	16.35	33.85	4.63	24.80	316	0.23
70	14.62	33.89	3.54	1.10				276	75	14.37	33.95	3.16	25.32	266	0.31
94	13.80	34.31	1.77	1.99				229	100	13.55	34.36	1.70	25.81	220	0.37
114	12.16	34.26	1.63	2.23				201	150	10.66	34.36	1.52	26.35	168	0.47
134	10.66	34.14	2.11	1.93b)				184	200	10.82	34.61	0.61	26.52	152	0.55
154	10.68	34.39	1.39	2.45				166	250	10.51	34.72	0.26	26.66	139	0.62
183	10.82	34.54	0.91	2.59				158	300	10.00	34.65	0.20	26.69	136	0.70
218	10.82	34.69	0.33	2.82				146	400	8.78	34.62	0.23	26.88	118	0.83
247	10.55	34.72	0.27	2.82				139	500	7.63	34.58	0.20	27.02	105	0.94
297	10.02	34.65	0.21	2.99b)				136	600	6.58	34.54	0.17	27.14	94	1.05
352	9.40	34.64	0.19	2.99b)				126							
434	8.34	34.60	0.24	3.10				113							
520	7.42	34.57	0.19	3.21				103							
603	6.53	34.54	0.17	3.29				93							

a) Duplicate values: 1 m, 0.23; 10, 0.17; 28, 0.21; 106, 2.40; 124, 2.48; 142, 2.78; 169, 3.14; 200, 2.70; 227, 2.74; 403, 2.87; 484, 3.16 µg at/L.

b) Duplicate values: 40 m, 0.25; 134, 2.13; 297, 2.87; 352, 2.93 µg at/L.

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OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

140.70 HUGH M. SMITH; August 24, 1959; 0940, 1007 GCT; 23°26'N, 114°55'W; sounding, 2000+ fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 20°, 30°.

1	25.96	34.49	4.55	0.37		0.3	518	0	(25.96)	(34.49)	(4.55)	(22.68)	(518)	(0.00)
10	25.36	34.42	4.59	0.39		0.2	505	10	25.36	34.42	4.59	22.81	505	0.05
29	24.09	34.38	4.79	0.45		-	471	20	25.25	34.41	4.60	22.84	502	0.10
37	22.76	34.31	4.95	0.49a)		0.2	440	30	23.97	34.37	4.81	23.20	468	0.15
51	17.57	34.05	4.91	0.71a)		0.2	328	50	17.85	34.05	4.95	24.60	334	0.23
64	16.24	34.19	3.09	1.44		0.2	288	75	15.88	34.24	2.71	25.22	276	0.31
87	14.50	34.26	2.13	1.89		0.3	246	100	12.48	34.06	2.15	25.78	222	0.37
105	12.47	34.09	2.15	2.00		0.6	220	150	11.34	34.37	1.31	26.25	178	0.47
122	11.96	34.25	1.67	2.24a)		3.2	198	200	10.72	34.52	0.68	26.48	156	0.56
140	11.49	34.30	1.43	2.72a)		-	186	250	9.72	34.46	0.58	26.60	145	0.63
166	11.14	34.47	1.13	2.58		18.7	168	300	8.92	34.46	0.66	26.73	132	0.71
196	10.78	34.52	0.69	2.58		-	158	400	8.04	34.45	0.33	26.86	120	0.84
223	10.36	34.51	0.67	2.70a)		-	151	500	7.09	34.46	0.22	27.00	107	0.96
267	9.36	34.43	0.53	3.17		36.7	141							
317	8.75	34.47	0.67	2.84		-	129							
374	8.32	34.45	0.40	2.95		32.3	124							
452	7.47	34.46	0.26	3.17a)		-	112							
533	6.86	34.45	0.21	3.37a)		-	104							

143.26 HUGH M. SMITH; August 21, 1959; 2345 GCT; 24°19'N, 111°48'W; sounding, 42 fm; wind, 200°, force 3; weather, partly cloudy; sea, rough; wire angle, 02°.

0	27.17	34.70	4.45	0.77b)			539	0	27.17	34.70	4.45	22.46	539	0.00
10	27.00	34.69	4.31	0.49b)			535	10	27.00	34.69	4.31	22.50	535	0.05
30	24.26	34.49	5.24	0.73b)			468	20	26.07	34.62	4.62	22.74	512	0.11
50	19.92	34.29	4.81	0.74			366	30	24.26	34.49	5.24	23.20	468	0.16
								50	19.92	34.29	4.81	24.27	366	0.24

143.30 HUGH M. SMITH; August 22, 1959; 0200 GCT; 24°10.5'N, 112°03'W; sounding, 110 fm; wind, 220°, force 4; weather, partly cloudy; sea, rough; wire angle, 00°.

1	27.16	34.56	4.35	0.57			548	0	(27.16)	(34.56)	(4.35)	(22.36)	(548)	(0.00)
11	27.12	34.56	4.26	0.58			548	10	27.13	34.56	4.26	22.37	548	0.05
31	21.68	34.27	4.97	0.56			413	20	25.50	34.45	4.46	22.80	506	0.11
51	17.91	34.27	3.64	1.18c)			320	30	21.90	34.28	4.95	23.72	418	0.15
75	15.62	34.56	1.29	2.34			248	50	18.05	34.27	3.73	24.72	324	0.23
100	15.16	34.76	0.81	2.63			223	75	15.62	34.56	1.29	25.51	248	0.30
125	14.84	34.78	0.64	2.72c)			215	100	15.16	34.76	0.81	25.78	223	0.36
154	14.04	34.87	0.45	2.32c)			193	150	14.16	34.86	0.45	26.07	195	0.47

a) Duplicate values: 37 m, 0.41; 51, 0.62; 122, 2.08; 140, 2.44; 223, 2.58; 452, 3.05; 533, 3.25 µg at/L.
b) Duplicate values: 0 m, 0.66; 10, 0.71; 30, 0.61 µg at/L.
c) Duplicate values: 51 m, 1.38; 125, 2.62; 154, 2.80 µg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 26, 1959; 0100 GCT; 24°12.5'N, 112°25'W; sounding, 550 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 07°. 143.35

2	26.76	-	4.23	0.30	2.1	0.0	0.7		0	(26.76)	(34.53)	(4.23)	(22.47)	(538)	(0.00)
12	26.78	34.53	4.09	0.28	2.2	0.0	0.2	539	10	26.77	(34.53)	4.12	(22.46)	(539)	(0.05)
32	19.90	33.94	5.02	0.17	-	-	-	392	20	26.75	34.53	4.09	22.47	538	0.11
41	18.64	34.11	4.93	0.18	1.2	0.0	1.1	349	30	22.20	34.11	4.77	23.51	439	0.16
56	16.56	34.02	3.97	0.77	6.1	0.17	4.5	307	50	17.46	34.06	4.52	24.70	325	0.23
71	14.78	34.23	1.86	1.80	17.3	0.06	23.7	254	75	14.26	34.18	1.63	25.52	247	0.30
95	14.08	34.39	1.10	2.10	22.9	0.02	26.8	228	100	14.03	34.42	1.03	25.75	225	0.36
115	13.37	34.50	0.72	2.36	27.5	0.0	31.8	206	150	12.56	34.65	0.40	26.24	179	0.47
134	12.51	34.55	0.57	2.34a)	30.2	0.01	30.0	186	200	12.20	34.69	0.31	26.33	170	0.56
154	12.61	34.69	0.38	2.68	-	-	-	178	250	10.99	34.78	0.21	26.63	142	0.64
183	12.42	34.69	0.38	2.94	35.7	0.01	32.1	175	300	10.22	34.66	0.16	26.67	138	0.71
217	11.94	34.70	0.26	2.64	-	-	-	165	400	8.97	34.59	0.22	26.82	124	0.84
247	11.07	34.78	0.22	2.66	-	-	-	144	500	7.40	34.50	0.20	26.98	108	0.97
297	10.3b)	34.67	0.15	2.74	41.9	0.0	32.6	139	600	6.43		0.29			
351	9.64	34.61	0.21	2.72	-	-	-	133							
435	8.40	34.55	0.22	2.90a)	55.4	0.0	34.4	118							
518	7.17	34.49	0.19	2.93	-	-	-	105							
603	6.40	-	0.29	3.13a)	75.6	0.0	44.5								

HUGH M. SMITH; August 25, 1959; 1853 GCT; 23°51'N, 112°40.5'W; sounding, 1800 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 17°. 143.40

2	26.28	34.14	4.11					552	0	(26.28)	(34.14)	(4.11)	(22.32)	(552)	(0.00)
11	26.26	34.14	4.36					552	10	26.26	34.14	4.36	22.32	552	0.06
30	18.94	34.09	5.15					357	20	26.23	34.14	4.39	22.34	551	0.11
39	17.38	34.07	4.31					322	30	18.94	34.09	5.15	24.36	357	0.16
53	15.34	33.93	3.80					288	50	15.88	33.97	3.94	25.02	295	0.22
67	13.35	33.96	2.49					245	75	13.21	34.01	2.29	25.60	240	0.29
90	12.63	34.22	1.55					213	100	12.40	34.26	1.52	25.95	206	0.34
109	11.66	34.19	1.49					198	150	11.11	34.38	1.45	26.30	174	0.44
129	11.38	34.29	1.31					185	200	10.95	34.56	0.52	26.46	158	0.52
147	11.15	34.37	1.51					175	250	10.72	34.62	0.29	26.55	149	0.60
174	10.92	34.49	0.52					162	300	10.26	34.64	0.19	26.65	140	0.68
207	10.90	34.56	0.52					157	400	8.06	34.50	0.24	26.89	117	0.81
235	10.78	34.60	0.34					152	500	6.78	34.45	0.28	27.05	103	0.93
282	10.58	34.65	0.19					145	600	(6.13)	(34.47)		(27.15)	(93)	(1.03)
335	9.35	34.58	0.22					130							
415	7.80	34.48	0.26					114							
498	6.80	34.45	0.29					103							
581	6.21	34.47	0.27					95							

a) Duplicate values: 134 m, 2.47; 435, 2.78; 603, 3.07 μg at/L.

b) Both protected thermometers at this level malfunctioned. Since an acceptable depth value was obtained, the temperature value was determined by calculation, using the unprotected thermometer reading.

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OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

143.50 HUGH M. SMITH; August 25, 1959; 1129 GCT; 23°26.5'N, 113°19'W; sounding, 1500 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°.

1	25.4	34.45	4.52	0.42	504	0	25.4	(34.45)	(4.52)	(22.82)	(504)	(0.00)
11	25.34	34.44	4.67	0.34	503	10	25.35	34.44	4.66	22.84	503	0.05
30	19.78	34.04	5.22	0.21	381	20	23.00	34.27	4.96	23.40	449	0.10
40	18.64	33.95	5.27	0.22	361	30	19.78	34.04	5.22	24.11	381	0.14
55	16.60	33.84	5.05	0.33	322	50	17.21	33.86	5.17	24.61	334	0.21
69	14.55	34.04	2.77	1.41a)	263	75	14.46	34.10	2.55	25.42	257	0.29
94	13.89	34.47	1.27	2.20	219	100	13.95	34.62	0.90	25.92	209	0.35
112	14.12	34.81	0.55	2.65	198	150	13.00	34.83	0.30	26.28	175	0.44
132	13.42	34.86	0.45	2.71a)	181	200	11.95	34.82	0.20	26.48	156	0.53
152	12.96	34.83	0.29	2.74	174	250	11.21	34.78	0.15	26.58	146	0.60
191	12.12	34.83	0.21	2.74	158	300	10.65	34.74	0.17	26.66	139	0.68
215	11.70	34.79	0.17	2.72	154	400	9.08	34.63	0.17	26.84	122	0.81
244	11.28	34.78	0.15	2.78	147	500	7.60	34.55	0.15	27.00	107	0.93
293	10.74	34.75	0.17	2.87	140	600	(6.32)	(34.47)	(0.19)	(27.11)	(96)	(1.04)
347	9.92	34.68	0.14	2.87	131							
430	8.60	34.60	0.19	3.03a)	117							
513	7.42	34.54	0.14	3.03	105							
598	6.36	34.47	0.19	3.18	96							

143.60 HUGH M. SMITH; August 25, 1959; 0225 GCT; 23°12.5'N, 114°04'W; sounding, 2200 fm; wind, 360°, force 3; weather, partly cloudy; sea, rough; wire angle, 16°.

1	25.28	34.06	4.55	0.27	528	0	(25.28)	(34.06)	(4.55)	(22.57)	(528)	(0.00)
11	25.27	34.10	4.47	0.31	525	10	25.27	34.10	4.47	22.59	526	0.05
35	20.08	34.09	5.10	0.29	385	20	23.90	34.10	4.64	23.01	486	0.10
45	19.12	34.01	5.07	0.33	367	30	21.08	34.10	4.99	23.80	411	0.15
59	17.54	33.95	4.97	0.41	335	50	18.89	34.00	5.06	24.30	363	0.22
74	15.56	33.88	4.30	0.69	296	75	15.54	33.90	4.25	25.03	294	0.31
98	13.23	33.96	2.59	1.71	244	100	13.20	33.99	2.42	25.59	240	0.38
117	13.44	34.42	1.10	2.43	214	150	12.88	34.70	0.35	26.21	182	0.48
136	13.39	34.71	0.36	2.58b)	191	200	11.97	34.71	0.19	26.39	165	0.57
165	12.44	34.70	0.34	2.85	174	250	11.20	34.70	0.19	26.53	152	0.65
195	12.05	34.71	0.19	2.85	166	300	10.51	34.72	0.12	26.67	138	0.73
232	11.40	34.70	0.21	3.03b)	155	400	9.10	34.62	0.17	26.82	124	0.86
262	11.06	34.70	0.14	2.89	149	500	7.82	34.62	0.14	27.03	104	0.98
307	10.41	34.72	0.12	3.01	137	600	6.62	34.59	0.11	27.17	91	1.09
373	9.48	34.62	0.17	2.99	129							
470	8.15	34.63	0.15	3.27b)	108							
559	7.15	34.60	0.10	3.27	96							
632	6.16	34.58	0.17	3.47b)	85							

a) Duplicate values: 69 m, 1.51; 132, 2.53; 430, 2.86 µg at/L.
b) Duplicate values: 136 m, 2.79; 232, 2.89; 470, 3.05; 632, 3.38 µg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 24, 1959; 1650, missing, 1745 GCT; 22°50'N, 114°32.5'W; sounding, 2200 fm; wind, 360°, force 2; weather, cloudy; sea, moderate; wire angle, 34°, 45°, 45°. 143.70

1	24.78	34.22	4.64	0.24	502	0	(24.78)	(34.22)	(4.64)	(22.84)	(502)	(0.00)
9	24.74	34.18	4.48	0.24	504	10	24.74	34.18	4.47	22.82	504	0.05
25	23.40	34.29	4.78	0.31a)	459	20	24.72	34.18	4.47	22.83	504	0.10
33	21.82	34.34	5.22	0.28	412	30	22.40	34.34	5.13	23.62	428	0.15
45	20.46	34.27	4.88	0.29	382	50	19.97	34.23	4.84	24.20	372	0.23
57	19.86	34.22	4.84	0.35a)	371	75	18.00	33.99	4.71	24.52	343	0.32
75	18.00	33.99	4.71	0.34	343	100	15.47	33.90	4.45	25.04	293	0.40
90	16.48	33.96	4.60	0.44	310	150	11.30	34.05	2.26	26.00	202	0.52
106	14.84	33.86	4.23	0.62a)	282	200	10.47	34.36	1.23	26.39	165	0.62
121	13.36	33.87	3.28	1.42	252	250	9.67	34.50	0.82	26.64	141	0.70
						300	9.44	34.53	0.39	26.70	135	0.77
131	12.22	33.86	2.99	1.53	232	400	(7.95)	(34.49)	(0.27)	(26.90)	(116)	(0.90)
155	11.23	34.08	2.15	2.12a)	198							
177	10.78	34.27	1.49	2.39	176							
211	10.32	34.39	1.13	2.55a)	160							
255	9.60	34.51	0.76	2.63	139							
322	9.36	34.53	0.31	2.97a)	134							
396	8.04	34.49	0.27	3.07	118							

HUGH M. SMITH; August 26, 1959; 1047 GCT; 23°47.5'N, 110°59.5'W; sounding, 95 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 12°. 147.20

2	27.13	34.73	4.12	0.37	535	0	(27.13)	(34.73)	(4.12)	(22.50)	(535)	(0.00)
12	27.14	34.71	4.19	0.37	537	10	27.14	34.71	4.19	22.48	537	0.05
31	21.28	34.39	5.22	0.43	394	20	27.10	34.71	4.21	22.49	536	0.11
51	18.00	34.33	3.61	0.99	318	30	22.90	34.47	4.96	23.58	432	0.16
74	15.06	34.13	2.65	1.40	267	50	18.03	34.33	3.62	24.77	319	0.23
99	15.91	34.74	1.15	2.20	241	75	15.06	34.14	2.64	25.31	267	0.30
123	15.06	34.85	0.60	2.40	215	100	15.92	34.75	1.14	25.60	240	0.37
152	14.20	34.84	0.79	2.56	198	150	14.26	34.84	0.77	26.03	199	0.48

HUGH M. SMITH; August 26, 1959; 1433 GCT; 23°37'N, 111°19'W; sounding, 155 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 13°. 147.25

1	26.78	34.63	4.28	0.32	532	0	(26.78)	(34.63)	(4.28)	(22.53)	(532)	(0.00)
10	26.77	34.60	4.42	0.30	534	10	26.77	34.60	4.42	22.51	534	0.05
30	22.80	34.38	4.74	0.23	436	20	26.76	34.60	4.43	22.52	533	0.11
48	19.90	34.20	5.03	0.22	373	30	22.80	34.38	4.74	23.54	436	0.16
72	17.72	34.03	4.47	0.40	333	50	19.62	34.18	5.01	24.25	368	0.24
95	15.08	34.05	3.00	1.22	274	75	17.30	34.01	4.28	24.71	324	0.32
119	13.63	34.15	1.94	1.79	237	100	15.01	34.11	2.82	25.31	268	0.40
157	12.58	34.43	0.05u	2.33b)	196	150	12.59	34.37	1.12	26.01	201	0.51
195	12.36	34.63	0.64	2.56b)	178	200	12.29	34.64	0.62	26.27	176	0.61
243	11.78	34.69	0.24	2.72	162	250	(11.71)	(34.70)	(0.23)	(26.43)	(161)	(0.70)

a) Duplicate values: 25 m, 0.23; 57, 0.26; 106, 0.70; 155, 2.41; 211, 2.70; 322, 2.90 μg at/L.
b) Duplicate values: 157 m, 1.99; 195, 2.33 μg at/L.

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OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

147.30 HUGH M. SMITH; August 26, 1959; 1931 GCT; 23°36'N, 111°49'W; sounding, 385 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.

2	26.20	34.42	3.91	0.15a)	1.2	0.0	0.2	530	0	(26.20)	(34.42)	(3.91)	(22.55)	(530)	(0.00)
12	26.14	34.42	3.87	0.19	1.2	0.0	0.0	528	10	26.17	34.42	3.88	22.56	529	0.05
31	24.81	34.40	3.98	0.19	-	-	-	490	20	26.10	34.42	3.87	22.58	527	0.10
41	22.74	34.43	4.17	0.30	1.4	0.0	0.2	430	30	25.00	34.40	3.95	22.91	496	0.16
56	20.80	34.22	4.11	0.22	1.3	0.0	0.2	394	50	21.46	34.29	4.16	23.85	406	0.25
70	19.36	34.18	4.07	0.31	1.8	0.0	0.4	361	75	18.72	34.12	3.94	24.45	349	0.34
85	17.34	34.00	3.66	0.49	2.9	0.04	0.4	326	100	15.49	34.08	2.42	25.17	280	0.42
114	14.99	34.31	1.35	1.94	17.3	0.03	7.3	253	150	12.66	34.61	0.43	26.18	185	0.54
133	13.36	34.31	1.06	2.00a)	22.8	0.01	-	220	200	11.91	34.64	0.35	26.34	169	0.63
153	12.60	34.63	0.40	2.57	-	-	-	182	250	11.13	34.66	0.32	26.50	154	0.71
183	12.46	34.61	0.42	2.62	31.9	0.0	55.2	181	300	10.17	34.62	0.17	26.66	140	0.79
214	11.50	34.67	0.29	2.73	-	-	-	159	400	9.03	34.55	0.16	26.78	127	0.93
245	11.20	34.66	0.32	2.71a)	-	-	-	155	500	8.06	34.50	0.20	26.89	117	1.06
294	10.24	34.63	0.16	2.78a)	38.4	0.0	-	141	600	(7.84)		(0.19)			
348	9.62	34.60	0.19	2.80a)	-	-	-	133							
430	8.66	34.51	0.16	2.92a)	50.9	0.01	57.1	125							
514	7.96	34.50	0.21	2.92	-	-	-	115							
598	7.84	34.47u	0.19	3.04a)	59.0	0.0	63.0								

147.40 HUGH M. SMITH; August 27, 1959; 0215 GCT; 23°20.5'N, 112°15.5'W; sounding, 1900 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 13°.

2	25.94	34.41	4.23	0.27				523	0	(25.94)	(34.41)	(4.23)	(22.63)	(523)	(0.00)
11	25.96	34.38	4.25	0.21				525	10	25.95	34.38	4.25	22.60	525	0.05
31	24.74	34.31	4.20	-				495	20	25.93	34.38	4.25	22.61	524	0.10
40	23.22	34.22	4.49	0.23				459	30	24.80	34.31	4.20	22.90	496	0.16
54	19.79	-	-	0.26b)					50	20.58	34.06	4.85	23.92	400	0.24
69	18.40	33.96	4.92	0.34				354	75	17.40	33.94	4.67	24.63	332	0.34
92	15.70	34.22	2.55	1.36				274	100	15.56	34.31	2.06	25.34	264	0.41
112	14.73	34.59	0.80	2.44b)				227	150	13.06	34.59	0.56	26.08	194	0.53
131	13.39	34.47	0.82	2.22b)				209	200	12.12	34.71	0.16	26.36	167	0.62
150	13.06	34.59	0.56	2.56				194	250	11.13	34.69	0.25	26.54	151	0.70
180	12.53	34.70	0.24	2.62				177	300	10.30	34.60	0.17	26.62	143	0.78
213	11.85	34.71	0.16	2.79				163	400	8.80	34.51	0.20	26.79	127	0.92
241	11.30	34.70	0.29	2.58b)				153	500	7.38	34.47	0.18	26.97	110	1.04
288	10.46	34.63	0.16	2.89b)				145	600	(6.14)	(34.42)	(0.26)	(27.10)	(97)	(1.15)
343	9.82	34.58	0.21	2.65				138							
423	8.42	34.51	0.19	2.87				122							
507	7.31	34.47	0.18	2.99				109							
591	6.26	34.43	0.26	3.11				98							

a) Duplicate values: 2 m, 0.21; 133, 2.20; 245, 2.65; 294, 2.72; 348, 2.88; 430, 2.82; 598, 2.96 μg at/L.
b) Duplicate values: 54 m, 0.14; 112, 2.36; 131, 2.34; 241, 2.83; 288, 2.58 μg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 27, 1959; 1040 GCT; 23°02'N, 113°00'W; sounding, 1900 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 06°. 147.50

1	25.26	34.42u	4.43	0.25		0	(25.26)	(34.14)	(4.43)	(22.64)	(522)	(0.00)
11	25.29	34.14	4.46	0.22	523	10	25.28	(34.14)	4.46	(22.63)	(523)	(0.05)
31	21.67	34.14	4.89	0.36a)	423	20	25.29	34.14	4.46	22.63	523	0.10
41	18.34	33.93	5.15	0.32	355	30	23.50	34.14	4.66	23.16	472	0.15
55	15.64	33.80	4.56	0.53	304	50	17.31	34.00	4.98	24.70	326	0.23
70	14.05	33.79	3.56	1.03	272	75	13.91	33.83	3.35	25.32	266	0.31
95	12.58	34.02	2.28	1.70a)	226	100	12.02	34.20	1.07	25.98	203	0.37
115	13.10	34.63	0.61	2.51	191	150	12.42	34.76	0.22	26.34	170	0.46
134	12.50	34.70	0.37	2.42a)	175	200	11.53	34.67	0.20	26.45	159	0.55
153	12.40	34.76	0.21	2.67	169	250	10.93	34.64	0.16	26.53	151	0.62
183	11.82	34.70	0.24	2.72	163	300	10.33	34.62	0.14	26.62	143	0.70
218	11.26	34.65	0.16	2.64a)	156	400	8.77	34.56	0.20	26.83	123	0.84
247	10.96	34.64	0.16	2.70	152	500	7.49	34.49	0.17	26.96	110	0.96
297	10.38	34.62	0.14	2.83a)	144	600	6.38	34.52	0.21	27.14	93	1.07
352	9.54	-	0.16	2.83								
435	8.22	34.52	0.21	2.95	118							
518	7.31	34.48	0.16	3.34a)	108							
603	6.34	34.52	0.21	3.16a)	92							

HUGH M. SMITH; August 27, 1959; 1845 GCT; 22°40'N, 113°35'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 07°. 147.60

1	26.22	34.54	4.27	0.44	522	0	(26.22)	(34.54)	(4.27)	(22.64)	(522)	(0.00)
11	26.22	34.54	4.11	0.46	522	10	26.22	34.54	4.11	22.64	522	0.05
31	22.13	34.27	4.65	0.51	425	20	26.22	34.54	4.11	22.64	522	0.10
40	18.86	34.11	4.76	0.55	354	30	25.20	34.47	4.22	22.90	496	0.16
55	16.48	34.04	3.93	0.87	304	50	17.19	34.05	4.31	24.76	319	0.24
70	14.76	34.07	2.74	1.43	266	75	14.32	34.15	2.02	25.49	250	0.31
94	14.83	34.60	0.87	2.32	229	100	14.41	34.61	0.70	25.82	219	0.37
113	13.48	34.58	0.58	2.53	202	150	12.28	34.59	0.43	26.24	179	0.47
133	12.66	34.57	0.47	2.47b)	187	200	11.46	34.64	0.32	26.43	161	0.55
153	12.21	34.60	0.42	2.69b)	177	250	10.86	34.69	0.15	26.58	146	0.63
182	11.62	34.61	0.30	2.67	166	300	10.12	34.62	0.16	26.66	139	0.71
216	11.33	34.67	0.35	2.81b)	156	400	8.70	34.57	0.12	26.86	120	0.84
245	10.92	34.69	0.14	2.81b)	147	500	7.42	34.52	0.17	27.00	106	0.96
294	10.20	34.63	0.16	2.83	140	600	6.47	34.50	0.18	27.12	95	1.07
349	9.44	34.61	0.18	2.81b)	130							
432	8.24	34.55	0.11	3.00	116							
515	7.30	34.53	0.19	3.10b)	104							
601	6.45	34.50	0.18	2.90b)	95							

HUGH M. SMITH; August 29, 1959; 0829 GCT; 23°24'N, 110°39'W; sounding, 225 fm; wind, 060°, force 2; weather, cloudy; sea, slight; wire angle, 03°. 150.19

1	27.58	34.72	4.28	0.29	550	0	(27.58)	(34.72)	(4.28)	(22.34)	(550)	(0.00)
11	27.16	34.64	4.27	0.29	542	10	27.18	34.65	4.27	22.42	543	0.05
31	19.68	34.16	4.81	0.35c)	370	20	21.20	34.21	4.70	23.86	405	0.10
51	18.62	34.37	3.69	0.67	330	30	20.40	34.18	4.78	24.05	387	0.14
75	18.01	34.78	1.81	1.31	286	50	18.60	34.36	3.69	24.65	330	0.21
99	16.87	34.83	1.35	1.50	255	75	18.01	34.78	2.04	25.11	286	0.29
124	16.38	34.84	1.33	1.56	244	100	16.89	34.84	1.34	25.44	255	0.36
163	14.81	34.75	0.79	1.78	217	150	15.98	34.86	1.17	25.66	234	0.48
202	13.02	34.75	0.34	1.89	182	200	13.12	34.75	0.34	26.20	183	0.59
251	11.76	34.76	0.27	1.89c)	157	250	11.78	34.76	0.27	26.47	157	0.68
300	10.94	34.70	0.18	2.00	147	300	10.94	34.70	0.18	26.57	147	0.76

a) Duplicate values: 31 m, 0.30; 95, 1.80; 134, 2.85; 218, 2.77; 297, 2.73; 518, 3.21; 603, 3.04 µg at/L.
b) Duplicate values: 133 m, 2.57; 153, 2.63; 216, 2.67; 245, 2.88; 349, 2.88; 515, 2.98; 601, 3.10 µg at/L.
c) Duplicate values: 31 m, 0.19; 251, 1.81 µg at/L.

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OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

150.25 HUGH M. SMITH; August 29, 1959; 0550 GCT; 23°12'N, 111°04'W; sounding, 700 fm; wind, 330°, force 3; weather, rain; sea, slight; wire angle, 11°.

1	27.18	34.42	4.19	0.64a)	559	0	(27.18)	(34.42)	(4.19)	(22.25)	(559)	(0.00)
11	26.60	34.43	4.25	0.33a)	541	10	26.61	34.43	4.24	22.43	542	0.06
30	23.94	34.38	4.72	0.30a)	467	20	26.54	34.43	4.25	22.46	539	0.11
40	21.49	34.15	4.97	0.30a)	417	30	23.94	34.38	4.72	23.21	467	0.16
54	19.9	34.21	4.72	0.44	372	50	20.02	34.19	4.73	24.17	376	0.24
69	17.39	33.96	4.60	0.49	330	75	16.40	34.00	3.94	24.92	305	0.33
93	15.34	34.10	2.89	1.38	275	100	15.02	34.24	2.18	25.39	259	0.40
112	15.16	34.56	1.19	2.34	238	150	14.30	34.81	0.91	26.00	202	0.52
131	14.88	34.78	0.67	2.40	216	200	13.06	34.83	0.32	26.27	176	0.61
150	14.30	34.81	0.91	2.59	202	250	12.28	34.83	0.17	26.43	161	0.70
179	13.41	34.81	0.34	3.02a)	184	300	11.08	34.70	0.18	26.54	150	0.78
213	12.88	34.84	0.34	2.69	172	400	9.01	34.54	0.18	26.77	128	0.93
242	12.42	-	0.24	2.52a)		500	7.74	34.53	0.18	26.96	110	1.05
290	11.30	34.72	0.19	2.91	152	600	(6.67)	(34.52)	(0.20)	(27.11)	(96)	(1.16)
343	10.21	-	0.19	2.75								
426	8.57	34.52	0.18	3.00	122							
508	7.66	34.53	0.18	3.05	109							
592	6.76	34.52	0.19	3.13a)	97							

150.30 HUGH M. SMITH; August 28, 1959; 2330 GCT; 23°02'N, 111°21'W; sounding, 1500 fm; wind, 350°, force 2; weather, overcast; sea, moderate; wire angle, 10°.

1	27.34	34.51	4.33	0.42	558	0	(27.34)	(34.51)	(4.33)	(22.26)	(558)	(0.00)
11	26.76	34.49	4.12	0.31	541	10	26.76	34.49	4.12	22.44	541	0.06
30	24.68	34.33	4.62	0.55b)	492	20	26.72	34.49	4.12	22.45	540	0.11
40	23.68	34.38	4.70	0.39	459	30	24.68	34.33	4.62	22.95	492	0.16
54	21.7	34.39	4.68	0.37	406	50	22.3	34.39	4.68	23.70	421	0.25
69	19.05	34.06	5.02	0.39	363	75	17.78	33.98	4.69	24.56	339	0.35
93	15.97	34.00	3.75	0.99b)	295	100	15.65	34.04	3.40	25.11	286	0.43
113	15.52	34.52	1.56	2.05	248	150	13.99	34.78	0.49	26.04	198	0.55
132	15.10	34.78	0.98	2.59b)	220	200	12.22	34.68	0.38	26.33	171	0.64
151	13.96	34.78	0.48	2.64	197	250	11.23	34.68	0.20	26.50	154	0.72
180	12.98	34.76	0.47	2.69	179	300	10.38	34.62	0.26	26.61	144	0.80
213	11.88	34.66	0.27	2.75	166	400	9.05	34.59	0.18	26.80	125	0.94
242	11.36	34.68	0.19	2.72	156	500	7.67	34.53	0.17	26.97	109	1.07
289	10.52	34.62	0.27	2.69	146	600	(6.69)	(34.61)	(0.19)	(27.09)	(98)	(1.18)
343	9.86	34.62	0.19	2.76	135							
426	8.66	34.56	0.18	2.95	121							
509	7.55	34.52	0.16	3.06	108							
592	6.76	34.51	0.19	3.13b)	98							

a) Duplicate values: 1 m, 0.41; 11, 0.47; 30, 0.40; 40, 0.40; 179, 3.15; 242, 2.71; 592, 3.03 μg at/L.
b) Duplicate values: 30 m, 0.35; 93, 0.91; 132, 2.36; 592, 3.07 μg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μgm at/L	μg at/L	μg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m
HUGH M. SMITH; August 28, 1959; 1725 GCT; 22°54'N, 111°41.5'W; sounding, 1750 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 05°.															150.35
1	26.92	34.56	4.49	0.38				541	0	(26.92)	(34.56)	(4.49)	(22.44)	(541)	(0.00)
11	26.85	34.56	4.30	0.31				540	10	26.87	34.56	4.31	22.45	540	0.05
30	24.77	34.43	4.65	0.29				487	20	26.78	34.56	4.30	22.48	537	0.11
40	23.85	34.40	4.70	0.32				463	30	24.77	34.43	4.65	23.00	487	0.16
55	21.0	34.12	5.04	0.27				406	50	22.2	34.24	4.93	23.59	431	0.25
69	19.22	34.01	5.00	0.30				370	75	19.06	34.01	4.96	24.27	366	0.35
94	15.98	34.13	2.90	1.33				286	100	15.86	34.16	2.83	25.16	282	0.43
113	13.61	34.04	2.49	1.64				245	150	13.85	34.70	0.59	26.01	201	0.55
133	13.59	34.44	1.06	2.11a)				215	200	12.21	34.72	0.22	26.35	168	0.65
152	13.84	34.72	0.55	2.65a)				200	250	11.28	34.74	0.16	26.54	150	0.73
181	12.76	34.72	0.29	2.74a)				178	300	10.22	34.63	0.19	26.64	141	0.81
215	11.86	34.74	0.19	2.80				160	400	8.83	34.57	0.16	26.83	123	0.94
244	11.39	34.75	0.16	2.76				151	500	7.60	34.50	0.16	26.96	110	1.07
293	10.34	34.63	0.19	2.81				142	600	(6.56)	(34.47)	(0.26)	(27.08)	(99)	(1.18)
346	9.56	34.61	0.16	2.75				131							
429	8.45	34.54	0.16	2.95				120							
513	7.42	34.50	0.16	3.05				108							
597	6.58	34.47	0.26	3.14				99							
HUGH M. SMITH; August 28, 1959; 1445 GCT; 22°48'N, 111°59.5'W; sounding, 1850 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 02°.															150.40
1	26.81	34.54	4.22	0.31				540	0	(26.81)	(34.54)	(4.22)	(22.45)	(540)	(0.00)
11	26.84	34.55	4.14	0.23				540	10	26.83	34.55	4.15	22.45	540	0.05
31	23.98	34.39	4.54	0.28				467	20	26.80	34.55	4.14	22.46	539	0.11
41	22.76	34.41	4.68	0.28				432	30	24.30	34.39	4.50	23.12	476	0.16
55	20.65	34.22	4.78	0.30				391	50	21.44	34.29	4.76	23.85	406	0.25
70	19.02	34.12	4.62	0.38				358	75	18.88	34.19	4.48	24.45	349	0.34
95	17.34	34.70	1.89	1.90				275	100	17.24	34.72	1.79	25.26	272	0.42
114	15.50	34.64	1.57	2.18				239	150	14.19	34.81	0.69	26.02	200	0.54
134	14.90	34.75	0.93	2.41b)				219	200	11.93	34.64	0.39	26.34	169	0.63
154	14.01	34.82	0.64	2.69b)				196	250	10.81	34.63	0.27	26.54	150	0.72
183	12.64	34.70	0.37	2.64				178	300	10.17	34.64	0.21	26.66	139	0.79
218	11.33	34.60	0.45	2.59				161	400	8.84	34.55	0.17	26.82	124	0.93
247	10.85	34.63	0.29	2.73b)				151	500	7.75	34.53	0.17	26.96	111	1.05
297	10.20	34.64	0.21	2.79				139	600	6.59	34.50	0.14	27.10	97	1.16
351	9.47	34.60	0.16	2.71b)				130							
435	8.42	34.51	0.18	3.01				122							
519	7.58	34.54	0.16	3.10				107							
603	6.54	34.50	0.14	3.28b)				96							

a) Duplicate values: 133 m, 2.69; 152, 2.55; 181, 2.65 μg at/L.
b) Duplicate values: 134 m, 2.31; 154, 2.61; 247, 2.61; 351, 2.90; 603, 2.82 μg at/L.

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OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

150.50 HUGH M. SMITH; August 28, 1959; 0816 GCT; 22°27.5'N, 112°32'W; sounding, 1840 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 04°.

1	25.08	34.25	4.51	0.27	509	0	(25.08)	(34.25)	(4.51)	(22.78)	(509)	(0.00)
11	25.02	34.27	4.43	0.27	506	10	25.04	34.27	4.44	22.80	507	0.05
31	23.42	34.04	4.70	0.27	478	20	24.90	34.26	4.44	22.84	503	0.10
40	21.52	33.93	5.50	0.28a)	434	30	23.85	34.10	4.60	23.02	485	0.15
55	18.68	34.01	4.75	0.30	357	50	19.38	34.01	5.01	24.19	374	0.24
70	16.82	33.94	4.68	0.44a)	319	75	16.68	33.94	4.62	24.80	316	0.32
94	15.36	34.23	2.42	1.56	266	100	14.80	34.26	2.11	25.46	253	0.40
114	13.70	34.25	1.75	2.01	231	150	12.90	34.57	1.00	26.10	192	0.51
133	13.59	34.54	0.87	2.40a)	207	200	11.10	34.53	0.69	26.42	162	0.60
153	11.44	34.38	1.15	2.74	180	250	10.56	34.63	0.35	26.58	146	0.68
182	11.32	34.49	0.79	2.45	169	300	9.89	34.59	0.24	26.67	138	0.75
217	10.80	34.85u	0.66	2.59		400	8.48	34.53	0.18	26.86	120	0.89
251	10.54	34.63	0.34	2.65	146	500	7.16	34.50	0.18	27.02	104	1.00
300	9.89	34.59	0.24	2.77a)	138	600	6.32	34.51	0.16	27.15	93	1.11
351	9.21	34.57	0.16	2.82	129							
433	7.93	34.49	0.22	2.98a)	116							
517	6.98	34.51	0.16	3.10a)	101							
602	6.30	34.51	0.16	3.18a)	92							

150.60 HUGH M. SMITH; August 28, 1959; 0115 GCT; 22°02'N, 113°14'W; sounding, 2000 fm; wind, 020°, force 2; weather, overcast; sea, rough; wire angle, 10°.

1	24.68	34.16	4.33	0.24	504	0	(24.68)	(34.16)	(4.33)	(22.82)	(504)	(0.00)
11	24.67	34.17	4.25	0.24	502	10	24.67	34.17	4.25	22.84	502	0.05
30	23.23	34.23	4.44	0.27	458	20	24.67	34.17	4.25	22.84	502	0.10
59	19.22	34.07	4.91	0.29	366	30	23.23	34.23	4.44	23.30	458	0.15
69	17.96	33.95	4.72	0.35	344	50	19.99	34.11	4.91	24.10	382	0.23
83	15.73	33.91	3.80	0.81	298	75	16.75	33.88	4.37	24.74	322	0.32
98	14.26	33.86	3.21	1.14	270	100	14.00	33.91	2.88	25.37	262	0.40
113	14.14	34.25	1.75	1.97	240	150	13.04	34.62	0.54	26.10	192	0.51
136	13.06	34.45	0.79	2.43b)	204	200	12.35	34.74	0.31	26.34	169	0.60
156	13.04	34.67	0.45	2.71b)	188	250	10.94	34.65	0.18	26.54	151	0.68
186	12.68	34.74	0.35	2.75	175	300	9.89	34.57	0.26	26.66	139	0.76
214	11.95	34.72	0.26	2.76	164	400	8.52	34.52	0.19	26.84	122	0.90
243	11.10	34.66	0.18	2.75	153	500	7.19	34.47	0.17	26.99	108	1.02
292	10.05	34.59	0.24	2.80	141	600	(6.12)	(34.48)	(0.18)	(27.14)	(93)	(1.12)
345	9.24	34.54	0.22	2.77	132							
427	8.14	34.51	0.16	2.96	117							
511	7.07	34.46	0.18	3.11	106							
595	6.17	34.47	0.18	3.16	94							

153.16 HUGH M. SMITH; August 29, 1959; 2135 GCT; 22°55.5'N, 110°12.5'W; sounding, 240 fm; wind, 160°, force 2; weather, partly cloudy; sea, moderate; wire angle, 25°.

1	30.41	34.21	4.35	0.07	673	0	(30.41)	(34.21)	(4.35)	(21.06)	(673)	(0.00)
9	29.74	34.46	4.38	0.14	637	10	29.50	34.48	4.39	21.53	628	0.06
27	24.22	34.52	4.65	0.24c)	465	20	28.30	34.50	4.46	21.94	588	0.12
45	21.38	34.47	4.59	0.50	391	30	23.60	34.51	4.64	23.41	448	0.18
66	19.06	34.82	2.58	1.49	307	50	20.78	34.54	4.26	24.22	371	0.26
87	18.08	34.88	2.15	1.76c)	279	75	18.93	34.83	2.50	24.94	303	0.34
108	17.20	34.90	1.67	2.00	258	100	17.25	34.90	1.69	25.40	259	0.42
141	14.90	34.70	0.77	2.36c)	222	150	14.29	34.72	0.60	25.93	208	0.54
174	13.39	34.74	0.40	2.52c)	189	200	12.83	34.75	0.28	26.25	178	0.64
218	12.51	34.74	0.22	2.62c)	172	250	12.13	34.71	0.20	26.36	168	0.73
263	11.99	34.70	0.19	2.60	166	300	11.38	34.68	0.18	26.48	156	0.81
362	10.18	34.65	0.16	2.72	138							

a) Duplicate values: 40 m, 0.36; 70, 0.50; 133, 2.26; 300, 2.87; 433, 2.90; 517, 2.71; 602, 3.10 µg at/L.
b) Duplicate values: 136 m, 2.31; 156, 2.63 µg at/L.
c) Duplicate values: 27 m, 0.68; 87, 1.66; 141, 2.26; 174, 2.62; 218, 2.47 µg at/L.

OBSERVED								COMP	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µgm at/L	µg at/L	µg at/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn m

HUGH M. SMITH; August 29, 1959; 1740, 1755 GCT; 22°46'N, 110°22.5'W; sounding, 500 fm; wind, 110°, force 3; weather, partly cloudy; sea, rough; wire angle, 26°, [a] 35°. 153.20

1	30.00	34.30	4.06	0.12	657	0	(30.00)	(34.30)	(4.06)	(21.23)	(657)	(0.00)
10	28.82	-	4.03	0.17		10	28.82	34.32	4.03	21.64	618	0.06
26	23.98	34.46	4.43	0.28	462	20	26.00	34.38	4.32	22.58	527	0.12
33	22.42	-	4.28	0.36		30	23.00	34.57	4.37	23.63	427	0.17
46	20.90	34.83	3.37	0.91	353	50	19.45	34.87	2.50	24.82	314	0.24
58	19.60	34.93	2.49	1.27	313	75	18.28	34.80	1.96	25.07	290	0.32
77	18.11	34.79	1.89	1.77	287	100	16.50	34.82	1.04	25.52	248	0.39
						150	14.18	34.76	0.63	25.99	203	0.50
91	17.10	-	1.44	1.89b)		200	12.61	34.77	0.36	26.31	172	0.60
106	16.10	34.82	0.80	2.17	239	250	12.20	34.71	0.24	26.34	169	0.68
121	14.98	34.74	0.58	2.05b)	221	300	11.59	34.69	0.15	26.45	159	0.77
144	14.19	-	0.64	2.42		400	9.40	34.60	0.15	26.76	130	0.92
170	13.30	34.77	0.43	2.49	185	500	(7.68)		(0.16)			
194	12.67	34.77	0.37	2.59b)	173							
233	12.32	34.72	0.32	2.66b)	170							
277	11.98	-	0.14	2.50b)								
342	10.56	34.67	0.18	2.72b)	143							
421	9.02	34.57	0.13	2.83	126							
499	7.70	-	0.16	3.00b)								

HUGH M. SMITH; August 29, 1959; 1430 GCT; 22°39.5'N, 110°35.5'W; sounding, 1300 fm; wind, 120°, force 4; weather, partly cloudy; sea, moderate; wire angle, 08°. 153.25

1	28.47	34.56	4.17	0.15	589	0	(28.47)	(34.56)	(4.17)	(21.94)	(589)	(0.00)
11	28.54	34.58	4.11	0.15	590	10	28.53	34.58	4.12	21.93	590	0.06
30	22.63	34.29	4.88	0.18	438	20	27.35	34.52	4.28	22.27	557	0.12
40	21.60	34.29	4.68	0.19	410	30	22.63	34.29	4.88	23.52	438	0.16
55	19.43	34.22	4.38	0.55c)	360	50	20.00	34.24	4.48	24.20	373	0.25
69	17.42	34.19	3.24	0.90c)	315	75	16.90	34.29	2.47	25.02	296	0.33
93	15.90	34.54	0.99	2.01c)	255	100	15.57	34.57		25.52	246	0.40
112	14.52	34.60	0.51	2.07c)	222	150	13.22	34.72	0.35	26.15	188	0.51
132	13.56	34.56	0.56	2.34c)	205	200	12.07	34.71	0.18	26.37	167	0.60
151	13.20	34.72	0.34	2.62c)	187	250	11.37	34.72	0.16	26.51	154	0.68
179	12.44	34.72	0.24	2.55c)	173	300	10.83	34.77	0.16	26.65	140	0.76
213	11.92	34.71	0.16	2.58	163	400	9.33	34.61	0.15	26.79	127	0.90
242	11.48	34.70	0.16	2.57c)	156	500	7.85	34.53	0.13	26.96	111	1.03
290	10.97	34.78	0.16	2.67c)	142	600	(6.69)	(34.51)	(0.14)	(27.10)	(97)	(1.14)
343	10.17	34.71	0.13	2.61	134							
426	8.94	34.58	0.16	2.87	124							
510	7.70	-	0.13	3.00c)								
595	6.74	34.51	0.14	2.74c)	98							

a) An assumed wire angle of 36° was used in depth determination.
b) Duplicate values: 91 m, 1.95; 121, 2.21; 194, 2.49; 233, 2.54; 277, 2.63; 342, 2.54; 499, 2.92 µg at/L.
c) Duplicate values: 55 m, 0.41; 69, 0.96; 93, 2.08; 112, 2.32; 132, 2.47; 151, 2.28; 179, 2.69; 242, 2.68; 290, 2.96; 510, 3.08; 595, 3.15 µg at/L.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
77.50-O	VIII-15	1200	35°04.5'	120°52.5'	84	-	1	cloudy	moderate	15.60	33.64
80.65-O	16	0218	34°02.0'	121°32.5'	1800	260°	2	partly cloudy	moderate	17.96	33.71
80.75-O	16	0830	33°40.0'	122°14.0'	2000	-	1	cloudy	moderate	16.61	33.50
80.85-O	16	1505	33°17.0'	122°56.0'	2150	calm		overcast	moderate	17.82	33.41
83.65-O	17	1318	33°24.0'	120°54.0'	1300	calm		overcast	slight	16.94	33.55
83.75-O	17	0740	33°04.0'	121°40.0'	2000	-	1	overcast	slight	16.82	33.38
83.85-O	17	0200	32°44.0'	122°24.0'	2000+	-	1	overcast	moderate	18.24	33.53
87.50-O	18	1935	33°19.5'	119°39.0'	44	280°	1	overcast	slight	19.28	33.78
87.65-O	19	0435	32°46.0'	120°42.5'	2000	310°	3	overcast	moderate	16.88	33.51
87.75-O	19	1025	32°22.0'	121°23.5'	2400	310°	5	overcast	rough	18.10	33.51
87.85-O	19	1620	31°59.0'	122°05.0'	2000+	320°	5	partly cloudy	rough	17.34	33.40
90.65-O	20	1800	32°09.0'	120°17.5'	2100	320°	3	partly cloudy	rough	17.70	33.46
90.75-O	20	1120	31°47.5'	121°04.0'	2100	320°	4	partly cloudy	rough	18.78	33.66
90.85-O	20	0610	31°30.0'	121°36.5'	2000+	320°	3	partly cloudy	rough	18.59	33.60
93.35-O	25	0004	32°40.0'	117°52.0'	300	270°	2	cloudy	slight	21.16	33.77
93.45-O	25	0600	32°20.0'	118°33.5'	900	270°	4	overcast	slight	20.72	33.75
93.55-O	25	1140	31°58.0'	119°17.0'	880	260°	2	drizzle	slight	20.10	33.77
93.65-O	25	1800	31°38.0'	119°59.0'	2000+	280°	4	drizzle	slight	18.16	33.55
93.75-O	25	2315	31°20.0'	120°35.0'	2000	290°	4	overcast	slight	18.92	33.45

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
93.85-O	VIII-26	0440	31°00.5'	121°15.0'	2000+	320°	4	overcast	slight	18.48	33.33
97.35-O	27	2205	32°07.0'	117°25.0'	500	290°	2	cloudy	slight	20.62	33.75
97.45-O	27	1700	31°49.5'	118°02.0'	700	320°	3	overcast	moderate	20.40	33.81
97.55-O	27	1050	31°28.0'	118°43.0'	230	330°	4	overcast	moderate	19.46	33.75
97.65-O	27	0435	31°07.0'	119°27.0'	2000+	330°	4	overcast	moderate	20.35	33.86
97.75-O	26	2230	30°45.5'	120°09.5'	2000+	330°	4	overcast	moderate	18.86	33.33
97.85-O	26	1623	30°25.0'	120°49.5'	2000+	310°	3	cloudy	slight	18.90	33.30
100.29-O	28	0845	31°41.5'	116°43.0'	108	320°	1	overcast	slight	16.53	33.56
100.35-O	28	1817	31°30.5'	117°05.0'	650	280°	3	overcast	moderate	21.39	33.79
100.45-O	29	0035	31°10.0'	117°47.0'	900+	320°	4	cloudy	moderate	20.04	33.65
100.55-O	29	0610	30°51.0'	118°27.0'	1000	310°	4	cloudy	moderate	19.74	33.66
100.65-O	29	1240	30°31.5'	119°06.0'	1700+	340°	4	overcast	moderate	18.78	33.53
100.75-O	29	1812	30°11.0'	119°47.0'	2000+	320°	3	overcast	moderate	19.42	33.57
100.85-O	29	2345	29°52.0'	120°24.0'	2000+	350°	4	overcast	moderate	19.42	33.40
103.55-B	25	0930	30°14.0'	118°03.0'	1580	270°	2	clear	moderate	19.92	33.55
103.65-B	25	0435	29°57.5'	118°44.5'	1680	270°	3	clear	moderate	19.94	33.58
103.75-B	24	2330	29°40.0'	119°25.0'	1800	330°	3	cloudy	moderate	20.08	33.67
103.85-B	24	1910	29°24.0'	119°57.5'	2000	320°	2	overcast	moderate	19.54	33.53
107.45-B	23	1325	30°03.0'	117°02.0'	950	160°	4	drizzle	rough	20.76	33.64

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
107.55-B	VIII-23	1930	29°41.0'	117°42.0'	1780	140°	4	overcast	rough	21.19	33.82
107.65-B	24	0006	29°21.5'	118°21.0'	1500	270°	4	overcast	rough	21.80	34.20
107.75-B	24	0500	29°02.0'	119°00.5'	1740	270°	3	missing	moderate	21.34	33.96
107.85-B	24	0930	28°42.0'	119°39.0'	1840	270°	3	cloudy	moderate	22.05	34.25
110.45-B	22	1830	29°26.0'	116°38.5'	840	040°	4	cloudy	rough	21.72	33.82
110.55-B	22	1342	29°07.0'	117°18.0'	1800	340°	3	partly cloudy	rough	21.31	33.77
110.65-B	22	0705	28°46.0'	117°59.0'	2000	360°	5	partly cloudy	moderate	21.28	34.02
110.75-B	21	1710	28°29.0'	118°42.0'	2000	330°	3	overcast	moderate	21.38	34.11
113.45-B	20	1510	28°52.0'	116°18.0'	950	320°	3	cloudy	rough	21.23	33.73
113.55-B	20	2030	28°32.0'	116°56.5'	1800	310°	3	partly cloudy	moderate	20.66	33.66
113.65-B	21	0210	28°12.0'	117°36.0'	2050	360°	4	partly cloudy	rough	21.92	33.69
113.75-B	21	0635	27°53.5'	118°15.0'	1850	320°	4	overcast	moderate	21.98	33.86
117.45-B	19	0655	28°18.0'	115°55.0'	1750	320°	3	cloudy	moderate	21.74	33.75
117.65-B	18	1845	27°38.0'	117°14.0'	2000	320°	4	overcast	moderate	22.64	33.84
117.75-B	18	1305	27°17.0'	117°52.0'	2000	320°	2	cloudy	slight	22.97	33.82
120.40-B	17	0615	27°56.5'	115°14.0'	21	280°	4	clear	moderate	20.43	33.58
120.55-B	17	1532	27°18.0'	116°13.0'	2000+	280°	4	cloudy	moderate	23.26	33.84
120.65-B	17	2045	27°03.0'	116°51.0'	1950	320°	4	cloudy	slight	22.24	33.71
120.75-B	18	0225	26°42.0'	117°30.0'	2000	340°	3	cloudy	moderate	23.51	33.82

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.55-B	VIII-15	2220	26°48.0'	115°49.5'	1800	290°	3	partly cloudy	moderate	23.96	33.91
123.65-B	15	1640	26°23.5'	116°29.0'	1950	320°	3	cloudy	slight	23.91	33.86
127.45-B	14	1930	26°33.5'	114°48.5'	2000+	280°	3	cloudy	moderate	24.18	33.89
127.55-B	15	0050	26°16.0'	115°27.0'	2000+	300°	3	cloudy	moderate	24.07	33.89
127.65-B	15	0630	25°54.0'	116°05.5'	2000+	270°	2	cloudy	slight	23.71	33.82
130.45-M	16	1630	25°58.5'	114°25.0'	2000	330°	4	partly cloudy	very rough	25.06	34.11
130.55-M	17	0140	25°39.0'	115°04.5'	2050	330°	3	cloudy	rough	25.36	34.18
130.65-M	17	1001	25°19.0'	115°43.0'	2050	350°	3	cloudy	rough	25.24	34.18
133.35-M	19	0240	25°47.0'	113°26.0'	300	340°	4	partly cloudy	rough	22.94	33.97
133.45-M	18	1620	25°24.5'	114°05.0'	1800	340°	3	partly cloudy	rough	23.68	34.03
133.55-M	18	0915	25°06.5'	114°43.0'	1850	340°	4	cloudy	very rough	25.06	34.14
137.45-M	20	1140	24°54.0'	113°48.0'	580	360°	4	cloudy	rough	22.72	33.99
140.55-M	23	2350	23°55.0'	114°01.5'	1000+	320°	3	partly cloudy	moderate	25.48	34.22
143.45-M	25	1510	23°40.0'	112°58.0'	1900	340°	4	cloudy	rough	20.97	33.97
143.55-M	25	0810	23°20.0'	113°39.5'	2000	320°	3	partly cloudy	rough	24.84	34.06
147.35-M	26	2230	23°26.0'	112°00.0'	1600	340°	3	partly cloudy	very rough	26.43	34.51
147.45-M	27	0710	23°10.0'	112°39.5'	1900	320°	4	partly cloudy	rough	26.44	34.64
147.55-M	27	1430	22°54.0'	113°18.5'	1850	330°	3	partly cloudy	rough	25.22	34.37
150.45-M	28	1155	22°41.0'	112°12.0'	1900	360°	2	cloudy	moderate	26.55	34.56
150.55-M	28	0410	22°14.0'	112°54.0'	1900	330°	3	partly cloudy	rough	24.88	34.18

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

90.32 ORCA; September 9, 1959; 0930 GCT; 33°20.5'N, 118°03'W; sounding, 400 fm; wind, direction missing, force 1; weather, clear; sea, slight; wire angle, 00°.

1	22.67	33.86	4.78	470	0	(22.67)	(33.86)	(4.78)	(23.18)	(470)	(0.00)
11	22.20	33.81	5.02	461	10	22.28	33.82	5.00	23.26	462	0.05
31	16.24	33.62	5.55	330	20	19.78	33.73	5.38	23.87	404	0.09
41	14.07	33.53	5.06	291	30	16.46	33.63	5.55	24.61	334	0.13
51	13.48	33.53	4.86	280	50	13.51	33.53	4.87	25.17	280	0.19
66	12.44	33.57	4.43	257	75	11.93	33.60	4.05	25.54	246	0.25
81	11.62	33.62	3.82	239	100	10.59	33.69	3.53	25.85	216	0.31
101	10.57	33.69	3.52	215	150	9.54	33.91	2.73	26.20	183	0.41
127	9.86	33.77	3.18	198	200	8.79	34.02	2.31	26.41	163	0.50
146	9.60	33.89	2.80	185	250	8.38	34.16	1.59	26.58	147	0.58
175	9.24	33.96	2.45	174	300	8.09	34.20	1.20	26.66	139	0.66
204	8.72	34.03	2.26	161	400	7.11	34.25	0.66	26.83	123	0.79
234	8.39	34.13	1.77	149	500	6.34	34.30	0.41	26.98	109	0.91
274	8.37	34.19	1.31	144							
333	7.72	34.22	1.06	133							
408	7.04	34.25	0.61	122							
483	6.44	34.29	0.43	111							
562	6.03	34.33	0.34	103							

90.37 ORCA; September 9, 1959; 1236 GCT; 33°10.5'N, 118°23.5'W; sounding, 600 fm; wind, direction missing, force 1; weather, cloudy; sea, slight; wire angle, 00°.

0	21.95	33.85	4.88	451	0	21.95	33.85	4.88	23.39	451	0.00
10	21.71	33.84	4.92	445	10	21.71	33.84	4.92	23.44	445	0.04
30	16.04	33.58	6.06	328	20	19.80	33.75	5.33	23.88	403	0.09
40	13.98	33.58	5.03	286	30	16.04	33.58	6.06	24.67	328	0.12
50	12.76	33.58	4.33	262	50	12.76	33.58	4.33	25.37	262	0.18
65	11.32	33.62	3.82	234	75	10.73	33.65	3.64	25.80	221	0.24
80	10.48	33.67	3.53	216	100	9.92	33.78	3.09	26.04	198	0.30
100	9.92	33.78	3.09	198	150	9.26	34.02	2.29	26.34	170	0.39
125	9.39	33.89	2.80	182	200	8.77	34.18	1.64	26.54	151	0.47
145	9.29	34.00	2.40	172	250	8.24	34.22	1.36	26.65	140	0.54
175	9.04	34.14	1.72	158	300	7.84	34.22	1.15	26.71	134	0.62
204	8.71	34.18	1.62	150	400	7.05	34.28	0.69	26.87	119	0.75
234	8.37	34.21	1.42	142	500	6.41	34.30	0.47	26.96	110	0.87
273	8.06	34.23	1.28	137							
333	7.56	34.22	0.96	130							
408	6.98	34.29	0.65	118							
483	6.51	34.29	0.50	112							
563	6.10	34.34	0.35	103							

90.45 ORCA; September 10, 1959; 1918 GCT; 32°58'N, 118°56'W; sounding, 900+ fm; wind, 280°, force 4; weather, partly cloudy; sea, rough; wire angle, 18°.

1	19.31	33.84	4.97	384	0	(19.31)	(33.84)	(4.97)	(24.08)	(384)	(0.00)
10	18.14	33.78	5.11	361	10	18.14	33.78	5.11	24.32	361	0.04
29	12.67	33.55	4.37	262	20	15.40	33.66	4.80	24.87	309	0.07
39	11.40	33.64	3.93	233	30	12.62	33.55	4.36	25.38	261	0.10
48	11.14	33.65	3.83	228	50	11.07	33.65	3.82	25.73	227	0.15
62	10.64	33.68	3.56	217	75	10.30	33.71	3.38	25.91	210	0.20
76	10.28	33.71	3.37	209	100	9.72	33.80	3.11	26.09	193	0.25
95	9.82	33.78	3.17	197	150	8.75	33.99	2.52	26.39	165	0.34
118	9.30	33.87	2.87	182	200	8.10	34.12	1.86	26.59	146	0.42
137	8.87	33.96	2.62	168	250	7.66	34.15	1.56	26.68	137	0.49
165	8.60	34.02	2.37	160	300	7.79	34.30	1.11	26.78	128	0.56
192	8.19	34.11	1.91	148	400	7.00	34.32	0.57	26.90	116	0.69
219	7.92	34.13	1.77	142	500	6.43	34.33	0.35	26.99	108	0.81
255	7.64	34.16	1.50	136							
310	7.80	34.32	-	126							
380	7.14	34.32	0.64	118							
451	6.69	34.32	0.41	112							
528	6.28	34.34	0.33	105							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
ORCA; September 10, 1959; 2327 GCT;[a] 32°42.5'N, 119°18.5'W; sounding, 200 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 08°.											90.50
2	18.36	33.78	5.41	366	0	(18.36)	(33.78)	(5.41)	(24.27)	(366)	(0.00)
5	18.34	33.78	5.36	365	10	18.33	33.77	5.36	24.28	365	0.04
8	18.34	33.78	5.35	365	20	17.53	33.69	5.39	24.41	353	0.07
11	18.33	33.77	5.36	366	30	14.45	33.44	5.40	24.91	305	0.11
14	18.25	33.75	5.39	366	50	13.00	33.41	4.92	25.18	279	0.16
17	17.74	33.70	5.42	358	75	10.48	33.62	3.61	25.81	220	0.23
20	17.53	33.69	5.39	353							
23	17.38	33.66	5.40	352							
26	16.32	33.58	5.36	334							
29	14.46	33.44	5.43	305							
32	14.41	33.42	5.32	306							
35	14.32	33.42	5.31	304							
38	14.32	33.39	5.20	304							
41	14.18	33.40	5.11	298							
47	13.96	33.39	5.08	292							
56	13.56	33.44	4.77	270							
66	12.62	33.58	4.05	235							
76	10.46	33.62	3.60	219							
ORCA; September 11, 1959; 0525 GCT; 32°24.5'N, 119°57.5'W; sounding, 485 fm; wind, 320°, force 2; weather, partly cloudy; sea, very rough; wire angle, 28°.											90.60
2	18.88	33.86	5.13	373	0	(18.88)	(33.86)	(5.13)	(24.20)	(373)	(0.00)
10	18.87	33.88	5.24	371	10	18.87	33.88	5.24	24.22	371	0.04
28	18.46	33.84	5.11	364	20	18.84	33.88	5.23	24.22	371	0.07
37	16.80	33.80	4.87	329	30	18.31	33.83	5.07	24.32	361	0.11
50	12.66	33.67	4.09	254	50	12.66	33.67	4.09	25.45	254	0.17
63	10.74	33.75	3.14	214	75	9.93	33.80	2.81	26.06	196	0.23
85	9.46	33.84	2.63	186	100	9.03	33.90	2.54	26.27	176	0.28
103	8.94	33.91	2.50	174	150	8.35	34.04	1.92	26.49	155	0.36
120	8.64	33.96	2.22	166	200	7.69	34.11	1.53	26.65	140	0.43
138	8.52	34.01	2.02	160	250	7.34	34.18	1.19	26.75	130	0.50
164	8.11	34.07	1.78	150	300	7.02	34.20	0.98	26.82	124	0.57
195	7.75	34.11	1.58	142	400	6.34	34.31	0.42	26.98	108	0.69
221	7.50	34.13	1.40	137	500	5.85	34.35	0.36	27.08	99	0.80
265	7.26	34.22	1.07	127							
314	6.92	34.20	0.94	123							
391	6.39	34.30	0.43	109							
471	6.00	34.34	0.38	102							
553	5.56	34.36	0.30	94							
ORCA; September 11, 1959; 1134 GCT; 32°03.5'N, 120°40'W; sounding, 2000+ fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 20°.											90.70
2	17.52	33.48	5.37	368	0	(17.52)	(33.48)	(5.37)	(24.25)	(368)	(0.00)
11	17.52	33.50	5.36	367	10	17.52	33.50	5.36	24.26	367	0.04
30	17.47	33.48	5.35	367	20	17.51	33.49	5.36	24.26	367	0.07
39	17.12	33.50	5.44	358	30	17.47	33.48	5.35	24.26	367	0.11
53	14.38	33.48	5.64	301	50	14.47	33.48	5.64	24.94	303	0.18
67	13.50	33.48	4.71	284	75	12.85	33.49	4.56	25.28	270	0.25
91	11.58	33.55	4.38	243	100	10.95	33.57	4.30	25.70	230	0.31
110	10.32	33.61	4.20	217	150	9.05	33.83	3.24	26.22	181	0.42
129	9.41	33.77	3.38	191	200	8.25	33.98	2.93	26.46	158	0.50
147	9.08	33.82	3.25	182	250	7.56	34.03	1.96	26.60	145	0.58
176	8.66	33.91	3.06	169	300	7.06	34.09	1.45	26.71	134	0.65
209	8.08	34.00	2.84	154	400	6.40	34.22	0.74	26.91	116	0.78
238	7.71	34.02	2.15	148	500	5.74	34.29	0.40	27.04	103	0.89
286	7.19	34.07	1.57	137	600	(5.22)	(34.32)	(0.28)	(27.14)	(94)	(1.00)
423	6.26	34.25	0.60	111							
507	5.70	34.29	0.38	102							
591	5.27	34.32	0.28	95							

a) Test cast.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
90.80	ORCA; September 11, 1959; 1819 GCT; 31°41'N, 121°27.5'W; sounding, 2000+ fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 19°.										
2	18.48	33.60	5.34	382	0	(18.48)	(33.60)	(5.34)	(24.10)	(382)	(0.00)
11	18.4	33.57	5.30	382	10	18.40	33.57	5.30	24.10	382	0.04
30	18.36	33.58	5.38	380	20	18.40	33.57	5.30	24.10	382	0.08
59	14.44	33.55	5.79	297	30	18.36	33.58	5.38	24.12	380	0.11
67	13.34	33.55	5.56	275	50	17.60	33.57	5.46	24.29	364	0.19
81	12.20	33.57	4.60	253	75	12.65	33.56	4.98	25.37	262	0.27
96	11.01	33.58	4.25	231	100	10.86	33.59	4.26	25.72	228	0.33
109	10.50	33.61	4.29	220	150	9.12	33.79	3.53	26.18	185	0.43
132	9.43	33.72	3.46	195	200	8.23	34.01	2.29	26.49	155	0.52
150	9.12	33.79	3.53	185	250	7.66	34.10	1.80	26.64	141	0.60
177	8.76	33.92	2.77	170	300	7.19	34.15	1.20	26.75	130	0.67
204	8.14	34.02	2.23	154	400	6.36	34.24	0.77	26.93	114	0.79
231	7.88	34.07	2.00	146	500	5.80	34.34	0.38	27.08	99	0.90
277	7.36	34.13	1.46	135							
328	6.98	34.18	0.95	126							
406	6.32	34.24	0.76	113							
487	5.85	34.34	0.40	100							
570	5.68	34.34	0.31	98							
90.90	ORCA; September 11, 1959; 2339 GCT; 31°25'N, 122°00'W; sounding, 2000+ fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 25°.										
1	18.64	33.60	5.27	386	0	(18.64)	(33.60)	(5.27)	(24.06)	(386)	(0.00)
9	18.64	33.61	5.22	385	10	18.64	33.61	5.22	24.07	385	0.04
28	18.48	33.58	5.19	384	20	18.57	33.60	5.21	24.08	384	0.08
36	18.15	33.58	5.33	376	30	18.45	33.58	5.20	24.09	383	0.12
50	14.41	33.15	5.99a)	326	50	14.41	33.15	5.99	24.69	326	0.19
63	13.96	33.21	5.90	312	75	13.61	33.34	5.50	25.01	296	0.26
85	13.30	33.44	5.14	282	100	12.20	33.40	4.94	25.34	265	0.34
103	11.93	33.40	4.88	260	150	9.63	33.71	3.87	26.03	199	0.45
120	10.74	33.51	4.45	232	200	8.50	33.97	3.14	26.42	162	0.54
138	9.94	33.65	3.89	208	250	7.72	34.03	2.65	26.58	147	0.62
163	9.28	33.78	3.85	189	300	7.19	34.12	1.46	26.72	133	0.70
192	8.64	33.96	3.01	166	400	6.06	34.16	0.85	26.90	116	0.82
218	8.20	33.98	3.39	158	500	5.54	34.24	0.43	27.04	103	0.94
260	7.59	34.04	2.46	144							
309	7.08	34.13	1.35	131							
383	6.22	34.15	0.95	119							
461	5.70	34.22	0.49	107							
541	5.40	34.27	0.38	100							
90.100	ORCA; September 12, 1959; 0456 GCT; 31°05'N, 122°39.5'W; sounding, 2000+ fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 15°.										
1	18.56	33.35	5.34	402	0	(18.56)	(33.35)	(5.34)	(23.90)	(402)	(0.00)
11	18.56	33.35	5.37	402	10	18.56	33.35	5.37	23.90	402	0.04
30	18.44	33.37	5.38	398	20	18.53	33.36	5.38	23.92	400	0.08
39	16.40	33.24	5.97	361	30	18.44	33.37	5.38	23.94	398	0.12
54	14.32	33.17	6.04	322	50	14.58	33.17	6.04	24.67	328	0.19
69	13.50	33.27	5.63	299	75	13.13	33.32	5.45	25.08	289	0.27
92	12.04	33.40	5.04	262	100	11.52	33.44	4.86	25.49	250	0.34
111	10.87	33.51	4.62	234	150	9.18	33.78	4.08	26.16	187	0.45
131	9.78	33.61	4.28	209	200	8.39	33.95	3.22	26.42	162	0.54
151	9.16	33.78	4.07	186	250	7.71	34.05	2.52	26.59	146	0.62
179	8.68	33.89	3.60	171	300	7.13	34.06	2.04	26.68	137	0.69
212	8.24	33.99	3.02	157	400	6.11	34.18	0.95	26.91	115	0.82
241	7.83	34.04	2.59	148	500	5.38	34.26	0.52	27.07	100	0.93
289	7.22	34.05	2.18	139	600	(5.02)	(34.33)	(0.30)	(27.16)	(91)	(1.04)
343	6.86	34.16	1.22	126							
426	5.78	34.18	0.88	111							
509	5.36	34.27	0.47	99							
594	5.04	34.33	0.30	92							

a) Alternate value, 6.12 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
ORCA; September 12, 1959; 1000 GCT; 30°43'N, 123°19'W; sounding, 2000+ fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 16°.											90.110
7	18.41	33.44	5.37	392	0	18.4	(33.44)	(5.37)	(24.00)	(392)	(0.00)
26	18.22	33.46	5.38	386	10	18.39	33.45	5.37	24.01	391	0.04
35	18.00	33.40	5.31	386	20	18.29	33.47	5.38	24.04	388	0.08
50	14.34	33.04	6.16	332	30	18.14	33.44	5.37	24.06	386	0.12
65	13.25	33.08	5.88	308	50	14.34	33.04	6.16	24.63	332	0.19
88	12.46	33.30	5.35	277	75	12.81	33.18	5.58	25.05	292	0.27
107	11.02	33.38	4.97	246	100	11.65	33.35	5.14	25.40	259	0.34
126	10.50	33.56	4.37	224	150	9.35	33.76	4.04	26.11	191	0.45
145	9.48	33.73	4.10	195	200	8.44	33.96	3.57	26.41	163	0.54
173	8.92	33.89	3.77	174	250	7.73	34.06	2.40	26.61	144	0.62
205	8.36	33.97	3.52	160	300	6.92	34.09	1.84	26.73	132	0.69
234	7.98	34.05	2.66	149	400	6.02	34.18	0.94	26.92	114	0.82
281	7.20	34.08	2.07	136	500	5.55	34.22	0.51	27.02	105	0.93
335	6.61	34.10	1.56	127							
416	5.92	34.20	0.83	111							
498	5.56	34.22	0.52	105							
566	5.22	34.33	0.34	93							
576	5.20	34.31	0.35	94							
ORCA; September 12, 1959; 1513 GCT; 30°22.5'N, 123°57'W; sounding, 2000+ fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 16°.											90.120
1	18.34	33.13	5.42	413	0	(18.34)	(33.13)	(5.42)	(23.78)	(413)	(0.00)
11	18.34	33.12	5.18	414	10	18.34	33.12	5.19	23.77	414	0.04
29	18.12	33.10	5.36	410	20	18.31	33.11	5.19	23.78	413	0.08
39	18.01	33.12	5.37	406	30	18.05	33.10	5.37	23.83	408	0.12
54	17.63	33.68	5.73	357	50	18.19	33.51	5.51	24.10	382	0.20
68	16.58	33.68	5.82	333	75	16.19	33.68	5.80	24.71	324	0.29
92	15.48	33.69	5.76	308	100	15.18	33.72	5.72	24.97	300	0.37
111	14.78	33.79	5.63	286	150	11.80	33.68	5.03	25.62	237	0.51
130	13.82	33.86	5.14	262	200	9.21	33.82	4.18	26.18	184	0.61
149	11.94	33.69	5.04	239	250	8.34	33.98	2.88	26.44	160	0.70
177	10.00	33.68	4.50	207	300	7.64	34.04	2.13	26.60	145	0.78
210	8.93	33.87	4.06	176	400	6.59	34.18	1.01	26.85	121	0.92
238	8.49	33.95	3.20	164	500	5.80	34.23	0.53	26.99	108	1.04
285	7.90	34.03	2.28	149	600	(5.29)	(34.35)		(27.15)	(93)	(1.15)
336	7.00	34.06	1.86	135							
417	6.48	34.20	0.83	118							
499	5.81	34.23	0.54	108							
583	5.34	34.32	0.40	96							
ORCA; September 9, 1959; 0207 GCT;[a] 32° 55'N, 117°21.5'W; sounding, 300 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 03°.											93.28
286	8.64	34.22	1.22	146							
289	8.58	34.22	1.22	145							
292	8.54	34.22	1.01	144							
316	8.32	34.23	0.99	140							
319	8.28	34.24	0.96	139							
322	8.29	34.22	0.98	141							
346	8.06	34.23	0.86	137							
349	8.08	34.26	0.86	135							
352	8.02	34.25	0.83	135							
376	7.68	34.29	0.59	127							
379	7.62	34.25	0.71	130							
382	7.58	34.22	0.68	131							
407	7.33	-	-								
409	7.32	34.29	0.58	122							
413	7.28	34.29	0.59	122							
437	7.12	34.28	0.58	120							
440	7.12	34.30	0.58	119							
442	7.11	34.25	0.60	122							

a) Test cast.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
93.28	ORCA; September 16, 1959; 2040 GCT; 32° 54'N, 117° 22'W; sounding, 150 fm; wind, 310°, force 2; weather cloudy; sea, moderate; wire angle, 26°.										
1	20.74	33.73	5.23	428	0	(20.74)	(33.73)	(5.23)	(23.62)	(428)	(0.00)
9	20.51	33.73	5.39	422	10	20.49	33.73	5.39	23.68	422	0.04
28	16.46	33.58	5.47	338	20	17.54	33.59	5.47	24.32	361	0.08
45	14.96	33.57	5.20	306	30	16.21	33.58	5.45	24.63	332	0.12
67	13.52	33.55	4.48	279	50	14.62	33.56	5.08	24.97	300	0.18
88	12.42	33.58	3.98	256	75	13.03	33.56	4.24	25.29	269	0.25
107	11.94	33.62	3.83	244	100	12.08	33.61	3.87	25.51	248	0.32
140	10.50	33.81	3.06	206	150	10.28	33.85	2.93	26.03	199	0.43
172	9.94	33.97	2.62	184	200	9.61	34.05	2.31	26.29	174	0.52
214	9.46	34.08	2.17	169							
93.30	ORCA; September 16, 1959; 1900 GCT; 32°50'N, 117°30'W; sounding, 585 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 15°.										
0	21.82	33.81	5.08	451	0	21.82	33.81	5.08	23.38	451	0.00
10	21.78	33.83	5.11	448	10	21.78	33.83	5.11	23.41	448	0.04
29	16.38	33.57	5.64	336	20	19.95	33.74	5.35	23.84	407	0.09
38	14.88	33.51	5.64	309	30	16.26	33.56	5.64	24.61	334	0.12
48	14.02	33.54	5.29	290	50	13.90	33.54	5.20	25.10	287	0.19
62	12.78	33.55	4.54	265	75	11.98	33.63	3.87	25.55	244	0.25
76	11.96	33.64	3.84	243	100	10.87	33.70	3.76	25.81	220	0.31
95	11.02	33.69	3.83	223	150	10.11	33.83	3.06	26.04	198	0.42
119	10.42	33.77	3.48	207	200	9.59	34.08	2.24	26.32	171	0.51
138	10.23	33.79	3.16	203	250	8.89	34.17	1.93	26.51	153	0.59
166	9.92	33.89	2.93	190	300	8.23	34.19	1.46	26.63	142	0.67
195	9.66	34.05	2.30	174	400	7.35	34.29	0.77	26.83	123	0.81
223	9.25	34.20	2.07	157	500	6.36	34.34	0.43	27.01	106	0.93
261	8.76	34.16	1.87	152							
319	8.00	34.22	1.28	137							
395	7.38	34.29	0.79	123							
463	6.74	34.31	0.54	113							
541	5.96	34.38	0.35	98							
93.40	ORCA; September 14, 1959; 2056 GCT; 32°21'N, 118°07'W; sounding, 400 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 28°.										
2	20.20	33.75	5.06	413	0	(20.20)	(33.75)	(5.06)	(23.78)	(413)	(0.00)
11	20.20	33.73	5.05	415	10	20.20	33.73	5.05	23.76	415	0.04
30	14.56	33.49	5.64	304	20	17.90	33.62	5.30	24.26	367	0.08
37	14.31	33.52	5.52	296	30	14.56	33.49	5.64	24.92	304	0.11
50	12.96	33.55	4.53	268	50	12.96	33.55	4.53	25.30	268	0.17
62	11.17	33.61	3.93	231	75	10.74	33.68	3.47	25.82	219	0.23
84	10.56	33.77	3.10	209	100	10.26	33.83	2.93	26.02	200	0.28
100	10.26	33.83	2.93	200	150	9.73	33.97	2.57	26.22	181	0.38
116	10.19	33.86	2.77	197	200	9.56	34.12	1.82	26.36	167	0.47
132	9.98	33.88	2.77	192	250	9.43	34.28	1.27	26.50	154	0.55
156	9.66	34.01	2.48	177	300	8.92	34.29	1.08	26.59	145	0.63
184	9.56	34.07	2.11	171	400	7.58	34.27	0.82	26.78	127	0.77
209	9.55	34.16	1.61	164	500	6.64	34.29	0.43	26.94	113	0.90
250	9.43	34.28	1.27	154							
298	8.96	34.29	1.10	146							
372	7.90	34.27	0.94	132							
449	7.10	34.27	0.57	121							
529	6.42	34.31	0.38	109							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

ORCA; September 14, 1959; 1535 GCT; 32°03'N, 118°46'W; sounding, 700 fm; wind, 320°, force 5; weather, partly cloudy; sea, high; wire angle, 16°. 93.50

2	19.44	33.72	5.13	397	0	(19.44)	(33.72)	(5.13)	(23.95)	(397)	(0.00)
11	19.45	33.68	5.12	400	10	19.45	33.68	5.12	23.92	400	0.04
35	16.42	33.51	5.71a)	342	20	19.45	33.68	5.14	23.92	400	0.08
45	14.98	33.46	5.77	315	30	18.14	33.60	5.41	24.18	374	0.12
60	14.09	33.43	5.41	299	50	14.70	33.45	5.68	24.86	310	0.19
74	13.05	33.45	5.11	277	75	13.02	33.45	5.10	25.20	277	0.26
98	11.28	33.55	4.48	238	100	11.19	33.56	4.43	25.64	236	0.33
117	10.38	33.66	4.01	215	150	9.22	33.88	2.85	26.23	180	0.43
137	9.42	33.78	3.25	190	200	8.39	34.15	2.10	26.56	148	0.51
166	9.03b)	33.98	2.51	170	250	7.85	34.13	1.57	26.64	141	0.59
195	8.47	34.15	2.33	149	300	7.49	34.21	1.17	26.75	130	0.66
234	8.00	34.10	1.74	146	400	6.82	34.30	0.70	26.91	115	0.78
264	7.75	34.16	1.44	138	500	6.10	34.35	0.35	27.05	102	0.90
313	7.42	34.23	1.09	128	600	5.60	34.38	0.32	27.13	94	1.00
376	7.00	34.29	0.82	118							
475	6.26	34.34	0.41	105							
564	5.78	34.37	0.32	97							
638	5.40	34.39	0.31	91							

ORCA; September 14, 1959; 0923 GCT; 31°41'N, 119°30'W; sounding, 2000+ fm; wind, 340°, force 4; weather, clear; sea, very rough; wire angle, 15°. 93.60

1	19.08	33.78	5.23	383	0	(19.08)	(33.78)	(5.23)	(24.09)	(383)	(0.00)
10	19.08	33.80	5.21	382	10	19.08	33.80	5.21	24.11	382	0.04
34	16.22	33.50	5.57	338	20	19.01	33.80	5.21	24.12	381	0.08
44	13.80	33.33	5.61	300	30	17.90	33.67	5.31	24.31	363	0.11
58	12.72	33.42	5.03	273	50	13.30	33.37	5.40	25.09	288	0.18
73	11.94	33.48	4.67	255	75	11.82	33.49	4.62	25.47	252	0.25
97	10.24	33.60	4.03	217	100	10.10	33.61	3.98	25.87	214	0.30
116	9.54	33.65	3.77	202	150	8.96	33.83	3.12	26.23	180	0.40
135	9.17	33.75	3.50	189	200	8.12	34.09	2.08	26.56	149	0.49
164	8.74	33.91	2.73	171	250	7.78	34.16	1.55	26.67	138	0.56
192	8.23	34.06	2.19	152	300	7.59	34.24	1.10	26.76	129	0.63
231	7.88	34.13	1.81	142	400	6.59	34.29	0.54	26.94	112	0.76
260	7.74	34.17	1.46	137	500	6.02	34.38	0.35	27.08	99	0.87
308	7.55	34.25	1.06	128	600	5.49	34.46	0.27	27.21	87	0.96
370	6.80	34.27	0.67	117							
467	6.22	34.35	0.40	104							
554	5.74	34.42	0.29	93							
629	5.32	34.48	0.25	83							

ORCA; September 14, 1959; 0327 GCT; 31°18'N, 120°07'W; sounding, 2000+ fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 29°. 93.70

3	18.26	33.55	5.37	380	0	(18.26)	(33.55)	(5.37)	(24.12)	(380)	(0.00)
11	18.25	33.55	5.41	380	10	18.25	33.55	5.40	24.12	380	0.04
33	18.19	33.55	5.36	380	20	18.23	33.55	5.38	24.12	380	0.08
41	16.24	33.36	5.94	348	30	18.21	33.55	5.37	24.13	380	0.11
54	15.06	33.35	5.97	325	50	15.15	33.35	5.97	24.68	327	0.18
67	14.53	33.46	5.86	306	75	14.02	33.48	5.66	25.03	294	0.26
88	13.20	33.52	5.04	275	100	12.22	33.51	4.60	25.41	258	0.33
104	11.98	33.51	4.53	253	150	9.80	33.67	3.62	25.96	205	0.45
121	11.28	33.55	4.34	238	200	8.60	34.00	2.48	26.42	162	0.54
144	10.09	33.62	3.80	213	250	8.01	34.18	1.62	26.65	140	0.62
167	9.08	33.84	3.23	181	300	7.58	34.24	1.11	26.76	130	0.69
200	8.60	34.00	2.48	162	400	6.73	34.28	0.57	26.92	115	0.82
223	8.46	34.11	1.91	152	500	6.08	34.29	0.36	27.01	106	0.93
263	7.86	34.20	1.51	137							
316	7.44	34.25	0.98	127							
402	6.72	34.28	0.56	115							
481	6.20	34.29	0.37	108							
550	5.74	34.31	0.36	101							

a) Alternate value, 5.59 ml/L, not used in interpolation.
b) Alternate value, 9.15°C, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

93.80 ORCA; September 13, 1959; 2140 GCT; 31°10.5'N, 120°52.5'W; sounding, 2000+ fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 28°.

2	18.58	33.31	5.17	406	0	(18.58)	(33.31)	(5.17)	(23.85)	(406)	(0.00)
11	18.59	33.31	5.18	406	10	18.59	33.31	5.18	23.86	406	0.04
28	18.52	33.31	5.15	404	20	18.57	33.31	5.16	23.86	405	0.08
37	18.32	33.33	5.17	397	30	18.49	33.31	5.15	23.88	403	0.12
50	16.04	33.40	5.61	342	50	16.04	33.40	5.61	24.53	342	0.20
63	14.70	33.31	5.70	320	75	13.89	33.30	5.57	24.92	304	0.28
84	13.24	33.30	5.39	292	100	12.32	33.46	4.98	25.36	263	0.35
101	12.22	33.46	4.96	261	150	9.38	33.74	3.82	26.09	193	0.46
118	10.74	33.51	4.42	232	200	8.37	33.98	3.00	26.45	159	0.55
135	9.83	33.66	4.04	206	250	7.69	34.08	2.07	26.62	143	0.63
159	9.16	33.78	3.70	187	300	7.04	34.10	1.47	26.73	133	0.70
188	8.62	33.95	3.09	166	400	6.12	34.19	0.70	26.92	114	0.83
214	8.09	34.01	2.95	154	500	5.52	34.28	0.41	27.07	100	0.94
256	7.63	34.09	1.91	142							
304	6.99	34.10	1.45	132							
378	6.28	34.17	0.86	118							
455	5.74	34.23	0.52	107							
535	5.38	34.33	0.35	95							

93.90 ORCA; September 13, 1959; 1436 GCT; 30°39'N, 121°44'W; sounding, 2000+ fm; wind, 360°, force 5; weather, overcast; sea, rough; wire angle, 10°.

2	18.79	33.35	5.18	408	0	(18.79)	(33.35)	(5.18)	(23.83)	(408)	(0.00)
12	18.79	33.35	5.17	408	10	18.79	33.35	5.17	23.83	408	0.04
32	18.80	33.35	5.11	408	20	18.79	33.35	5.15	23.83	408	0.08
41	18.65	33.40	5.21	401	30	18.80	33.35	5.12	23.83	408	0.12
55	17.23	33.56	5.52	356	50	17.60	33.55	5.49	24.28	366	0.20
70	16.31	33.53	5.41	338	75	16.01	33.50	5.40	24.62	333	0.29
94	14.72	33.46	5.38	309	100	14.70	33.49	5.37	24.90	306	0.37
114	13.29	33.52	5.17	277	150	11.02	33.64	4.46	25.73	227	0.50
133	12.29	33.60	4.97	252	200	8.95	33.89	3.92	26.28	175	0.60
152	10.81	33.65	4.38	223	250	8.01	34.01	3.02	26.51	153	0.69
182	9.39	33.78	4.11	190	300	7.25	34.05	2.35	26.66	139	0.77
215	8.63	33.95	3.68	166	400	6.40	34.17	1.13	26.87	119	0.90
245	8.10	34.00	3.10	154	500	5.71	34.26	0.47	27.03	104	1.02
293	7.34	34.04	2.43	141	600	(5.30)	(34.34)	(0.37)	(27.14)	(93)	(1.12)
348	6.74	34.07	1.81	131							
431	6.22	34.21	0.75	114							
514	5.63	34.27	0.44	102							
599	5.31	34.34	0.37	94							

93.100 ORCA; September 13, 1959; 0857 GCT; 30°21'N, 122°20'W; sounding, 2000+ fm; wind, 350°, force 5; weather, cloudy; sea, very rough; wire angle, 09°.

1	19.10	33.48a)	5.26	406	0	(19.10)	(33.48)	(5.26)	(23.86)	(406)	(0.00)
10	19.10	33.47	5.20	406	10	19.10	33.47	5.20	23.85	406	0.04
30	18.94	33.48	5.25	401	20	19.06	33.47	5.21	23.86	405	0.08
40	17.87	33.46	5.46	378	30	18.94	33.48	5.25	23.90	401	0.12
54	16.68	33.51	5.69	347	50	17.20	33.50	5.62	24.33	360	0.20
69	15.70	33.55	5.75	323	75	15.85	33.62	5.76	24.75	321	0.28
94	14.72	33.68	5.52	293	100	14.51	33.69	5.46	25.09	288	0.36
114	14.06	33.75	5.33	275	150	11.03	33.69	4.78	25.77	224	0.49
134	12.56	33.68	5.02	251	200	8.99	33.87	4.04	26.26	177	0.59
153	10.82	33.69	4.74	220	250	8.09	34.05	3.20	26.54	151	0.68
183	9.44	33.78	4.27	191	300	7.29	34.08	1.99	26.67	138	0.75
217	8.64	33.96	3.81	165	400	6.39	34.19	1.00	26.89	117	0.89
246	8.16	34.04	3.29	152	500	5.74	34.28	0.51	27.04	103	1.00
295	7.35	34.07	2.05	139	600	5.28	34.38	0.35	27.17	91	1.11
350	6.81	34.14	1.35	127							
435	6.12	34.22	0.78	112							
519	5.65	34.30	0.44	100							
605	5.26	34.38	0.35	90							

a) Salinity bottle numbers were not recorded on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; September 13, 1959; 0235 GCT; 30°06.5'N, 122°53.5'W; sounding, 2000+ fm; wind, 045°, force 4; weather, cloudy; sea, very rough; wire angle, 24°. 93.110

1	18.26	33.17	5.37	408	0	(18.26)	(33.17)	(5.37)	(23.83)	(408)	(0.00)
10	18.26	33.16	5.40	409	10	18.26	33.16	5.40	23.82	409	0.04
29	18.20	33.15	5.31	408	20	18.24	33.16	5.34	23.82	409	0.08
37	18.04	33.13	5.37	406	30	18.19	33.15	5.31	23.83	408	0.12
51	17.58	33.52	5.62	367	50	17.60	33.47	5.59	24.22	371	0.20
65	15.50	33.38	5.94	331	75	15.50	33.52	5.85	24.75	321	0.29
87	15.18	33.55	5.74	312	100	14.78	33.62	5.61	24.98	299	0.37
105	14.62	33.66	5.54	292	150	10.71	33.54	4.60	25.71	229	0.50
122	13.58	33.68	5.40	270	200	8.88	33.83	3.93	26.24	179	0.60
141	11.34	33.51	4.81	242	250	7.98	34.00	3.36	26.51	153	0.69
168	9.70	33.64	4.30	205	300	7.22	34.04	2.30	26.66	139	0.76
199	8.92	33.83	3.94	179	400	6.22	34.15	0.95	26.88	119	0.90
227	8.33	33.95	3.70	162	500	5.78	34.29	0.51	27.04	103	1.02
271	7.67	34.02	3.00	147							
322	6.92	34.05	1.83	135							
401	6.22	34.15	0.94	118							
480	5.88	34.27	0.55	106							
562	5.46	34.33	0.37	96							

ORCA; September 13, 1959; 0344 GCT;[a] 30°06.5'N, 122°53.5'W; sounding, 2000+ fm; wind, 045°, force 4; weather, cloudy; sea, very rough; wire angle, 12°. 93.110

34	18.12	33.23	5.40	400
43	18.09	33.39	5.45	388
50	16.48	33.28	5.83	360
58	15.78	33.36	5.82	339
61	15.44	33.38	5.90	330
64	15.07	33.34	5.92	325
67	15.29	33.49	5.88	319
70	15.45	33.55	5.83	318
73	15.48	33.57	5.83	317
76	15.60	33.62	5.70	316
89	15.32b)	33.64	5.72	308
92	15.18	33.64	5.72	306
95	15.18	33.67	5.67	304
98	15.18	33.68	5.65	303
101	14.92	33.66	5.60	299
104	14.83	33.69	5.53	295
107	14.58	33.71	5.55	288
137	11.82	33.48	5.00	252

ORCA; September 12, 1959; 2044 GCT; 29°49.5'N, 123°34'W; sounding, 2000+ fm; wind, 360°, force 4; weather, cloudy; sea, rough; wire angle, 18°. 93.120

1	18.72	33.16	5.23	420	0	(18.72)	(33.16)	(5.23)	(23.71)	(420)	(0.00)
10	18.69	33.19	5.24	417	10	18.69	33.19	5.24	23.74	417	0.04
29	18.58	33.17	5.19	416	20	18.64	33.18	5.23	23.74	417	0.08
39	18.51	33.23	5.11	410	30	18.58	33.17	5.18	23.75	416	0.12
53	17.94	33.60	5.49	370	50	18.20	33.53	5.40	24.12	381	0.20
67	16.67	33.75	5.59	330	75	16.40	33.77	5.56	24.74	322	0.29
91	16.00	33.78	5.47	312	100	15.70	33.79	5.45	24.90	306	0.37
110	15.24	33.80	5.43	295	150	11.39	33.62	4.70	24.65	235	0.51
128	13.98	33.78	5.10	271	200	9.32	33.79	4.16	26.14	188	0.62
146	11.73	33.62	4.75	240	250	8.37	33.89	3.03	26.36	167	0.71
170	9.84	33.66	4.45	206	300	7.58	34.03	2.40	26.59	146	0.79
204	9.26	33.80	4.13	187	400	6.37	34.12	1.14	26.84	122	0.93
232	8.70	33.84	3.30	175	500	5.82	34.20	0.57	26.97	110	1.05
277	7.94	33.96	2.84	154							
327	7.14	34.04	1.92	138							
407	6.32	34.13	1.09	121							
488	5.88	34.20	0.62	111							
571	5.47	34.25	0.36	102							

a) Test cast.
b) Alternate value, 15.52°C, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

97.32 BLACK DOUGLAS; September 21, 1959; 2316 GCT;[a] 32°11'N, 117°17'W; sounding, 700 fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 19°.

423	6.80	34.35	0.39	111							
425	6.81	34.34	0.35	112							
428	6.76	34.33	0.36	112							
452	6.59	34.33	0.26	110							
455	6.60	34.34	0.25	109							
458	6.56	34.34	0.25	108							
482	6.40	34.34	0.27	106							
485	6.40	34.35	0.24	106							
488	6.39	34.37	0.27	104							
512	6.18	34.39	0.25	100							
515	6.16	34.36	0.27	102							
517	6.16	34.36	0.30	102							
542	6.00	-	-								
545	5.98	34.34	0.31	102							
547	5.94	34.36	0.35	99							
572	5.84	34.36	0.25	98							
574	5.83	34.38	0.30	96							
577	5.82	34.42	0.29	94							

113.30 BLACK DOUGLAS; September 23, 1959; 0036 GCT; 29°22'N, 115°18'W; sounding, 30 fm; wind, 260°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.

0	18.49	33.70	5.64	375	0	18.49	33.70	5.64	24.18	375	0.00
9	16.56	33.62	5.64	336	10	16.40	33.62	5.63	24.62	333	0.04
28	14.90	33.64	5.29	300	20	15.38	33.63	5.44	24.86	310	0.07
48	13.57	33.61	4.50	275	30	14.85	33.64	5.27	24.98	299	0.10
					50	(13.40)	(33.61)	(4.40)	(25.26)	(272)	(0.16)

113.35 BLACK DOUGLAS; September 23, 1959; 0405 GCT; 29°11.5'N, 115°38'W; sounding, 740 fm; wind, 270°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.

0	17.94	33.66	5.25	365	0	17.94	33.66	5.25	24.28	365	0.00
9	17.86	33.64	5.47	364	10	17.85	33.63	5.48	24.29	364	0.04
28	15.83	33.59	5.27	324	20	17.45	33.61	5.48	24.36	357	0.07
38	15.39	33.64	5.11	310	30	15.75	33.60	5.22	24.76	320	0.11
54	13.85	33.66	4.61	278	50	14.87	33.66	4.96	24.98	298	0.17
69	13.33	33.64	4.35	269	75	13.10	33.67	4.28	25.37	262	0.24
93	11.79	33.74	4.13	233	100	11.29	33.74	3.97	25.76	224	0.30
111	10.83	33.79	3.69	213	150	10.35	34.03	2.29	26.16	187	0.40
132	10.68	33.92	2.73	200	200	9.72	34.22	1.42	26.41	163	0.49
152	10.32	34.04	2.25	186	250	9.93	34.38	0.68	26.51	153	0.57
181	9.79	34.18	1.64	166	300	9.36	34.40	0.66	26.61	144	0.65
216	9.73	34.25	1.22	160	400	7.91	34.30	0.67	26.76	130	0.79
245	9.96	34.38	0.70	154	500	6.80	34.34	0.37	26.95	112	0.92
294	9.40	34.40	0.67	144	600	(5.85)	(34.38)	(0.22)	(27.10)	(97)	(1.03)
349	9.09	34.43	0.56	137							
433	7.24	34.25	0.72	124							
516	6.68	34.36	0.31	108							
595	5.90	34.38	0.22	97							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
BLACK DOUGLAS; September 23, 1959; 0705 GCT; 29°02'N, 115°57'W; sounding, 600 fm; wind, 260°, force 4; weather, cloudy; sea, moderate; wire angle, 24°.											11340
5	19.15	33.84	4.77	381	0	19.3	(33.84)	(4.77)	(24.07)	(385)	(0.00)
13	18.89	33.70	4.86	385	10	18.99	33.73	4.85	24.08	384	0.04
31	17.86	33.80	4.81	353	20	18.72	33.70	4.86	24.11	381	0.08
41	17.68	33.84	4.48	346	30	17.89	33.79	4.82	24.39	354	0.11
55	15.74	33.64	4.93	318	50	17.53	33.72	4.82	24.66	329	0.18
69	14.47	33.67	4.34	289	75	14.00	33.67	4.03	25.18	280	0.26
92	12.44	33.66	2.83	251	100	12.16	33.68	2.62	25.56	244	0.32
110	11.96	33.71	2.51	238	150	11.09	33.82	2.06	25.86	215	0.44
128	11.60	33.76	2.05	228	200	9.87	34.08	2.05	26.28	176	0.54
147	11.18	33.81	2.03	217	250	9.33	34.21	1.45	26.47	157	0.62
175	10.38	33.93	2.36	194	300	8.82	34.34	0.98	26.66	140	0.70
207	9.74	34.10	1.93	172	400	7.46	34.33	0.60	26.84	122	0.84
234	9.44	34.16	1.66	163	500	6.58	34.33	0.47	26.97	110	0.96
280	9.10	34.33	1.09	145							
332	8.28	34.33	0.85	133							
410	7.36	34.32	0.60	120							
490	6.64	34.33	0.48	110							
573	6.02	34.35	0.31	102							
BLACK DOUGLAS; September 23, 1959; 1848 GCT; 29°11'N, 114°55'W; sounding, 40 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 00°.											11527
0	19.18	33.69	5.51	392	0	19.18	33.69	5.51	24.00	392	0.00
9	18.60	33.68	5.59	379	10	18.58	33.68	5.59	24.14	378	0.04
29	15.64	33.59	5.35	319	20	16.85	33.62	5.50	24.51	343	0.07
49	13.72	33.57	4.65	281	30	15.54	33.59	5.32	24.79	317	0.11
					50	(13.60)	(33.57)	(4.61)	(25.18)	(279)	(0.17)
BLACK DOUGLAS; September 23, 1959; 1645 GCT; 29°05'N, 115°08'W; sounding, 50 fm; wind, 260°, force 3; weather, overcast; sea, moderate; wire angle, 00°.											11530
0	18.72	33.66	4.75	384	0	18.72	33.66	4.75	24.08	384	0.00
10	18.73	33.69	4.81	382	10	18.73	33.69	4.81	24.10	382	0.04
30	14.94	33.61	4.36	301	20	17.94	33.68	4.80	24.30	364	0.08
50	12.94	33.62	4.11	263	30	14.94	33.61	4.36	24.96	301	0.11
75	11.62	33.78	2.32	227	50	12.94	33.62	4.11	25.36	263	0.16
					75	11.62	33.78	2.32	25.73	227	0.23
BLACK DOUGLAS; September 23, 1959; 1349 GCT; 28°53'N, 115°28'W; sounding, 500 fm; wind, 320°, force 4; weather, drizzle; sea, rough; wire angle, 06°.											11535
0	20.37	33.83	4.82	411	0	20.37	33.83	4.82	23.80	411	0.00
10	20.43	33.81	4.96	415	10	20.43	33.81	4.96	23.76	415	0.04
30	17.66	33.73	5.41	354	20	18.92	33.77	5.23	24.12	380	0.08
39	16.31	33.67	5.50	328	30	17.66	33.73	5.41	24.40	354	0.12
54	15.30	33.66	5.35	307	50	15.52	33.66	5.41	24.85	311	0.18
70	13.70	33.70	4.44	272	75	14.00	33.83	4.29	25.30	268	0.26
96	12.54	33.75	3.16	246	100	12.80	33.86	2.91	25.57	242	0.32
116	12.82	34.10	1.79	226	150	10.95	34.01	2.47	26.04	198	0.43
136	11.56	34.05	2.20	206	200	10.36	34.22	1.55	26.30	173	0.53
156	10.78	34.01	2.51	196	250	9.43	34.22	1.65	26.46	158	0.61
185	10.36	34.14	1.81	178	300	8.69	34.29	1.26	26.63	142	0.69
222	10.37	34.29	1.43	168	400	7.72	34.34	0.62	26.82	124	0.83
252	9.38	34.22	1.67	157	500	6.56	34.37	0.32	27.01	106	0.95
301	8.68	34.29	1.25	142	600	5.99	34.39	0.22	27.10	98	1.06
356	8.29	34.34	0.76	132							
442	7.16	34.36	0.50	115							
526	6.37	34.38	0.26	103							
611	5.96	34.39	0.22	97							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
115.40	BLACK DOUGLAS; September 23, 1959; 1050 GCT; 28°45'N, 115°47'W; sounding, 475 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 14°.										
0	21.12	33.86	–	429	0	21.12	33.86		23.61	429	0.00
8	21.13	33.86	5.67	429	10	21.11	33.86	5.67	23.61	429	0.04
28	16.94	33.75	5.46	336	20	18.81	33.77	5.54	24.40	354	0.08
37	15.92	33.73	5.20	315	30	16.93	33.75	5.45	24.60	335	0.12
52	14.48	33.64	5.37	292	50	14.90	33.66	5.34	24.98	298	0.18
67	13.89	33.70	4.89	275	75	13.08	33.78	3.60	25.45	254	0.25
91	13.06a)	34.04	2.40	234	100	12.78	34.06	2.06	25.73	227	0.31
112	12.51a)	34.11	1.73	219	150	11.77	34.14	1.49	25.98	203	0.42
131	11.97a)	34.10	1.68	209	200	10.89	34.26	1.47	26.24	179	0.52
151	11.78	34.14	1.48	203	250	10.47	34.43	0.88	26.45	159	0.60
181	11.25	34.20	1.59	190	300	9.65	34.40	0.90	26.56	148	0.68
216	10.66	34.34	1.25	169	400	8.00	34.36	0.70	26.79	127	0.82
249	10.48	34.43	0.89	160	500	6.59	34.32	0.57	26.96	111	0.95
298	9.68	34.40	0.92	149	600	5.93	34.39	0.29	27.10	97	(1.06)
353	9.01	34.41	0.70	138							
438	7.24	34.33	0.69	119							
524	6.42	34.33	0.50	108							
609	5.87	34.40	0.27	96							
117.26	BLACK DOUGLAS; September 23, 1959; 2110 GCT; 28°56'N, 114°41.5'W; sounding, 41 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.										
0	20.28	33.83	5.21	409	0	20.28	33.83	5.21	23.82	409	0.00
9	20.27	33.86	5.28	407	10	20.26	33.86	5.29	23.85	406	0.04
29	13.88	33.56	4.31	285	20	16.00	33.64	4.74	24.73	323	0.08
49	12.44	33.62	2.93	254	30	13.76	33.56	4.25	25.15	283	0.11
					50	(12.40)	(33.62)	(2.86)	(25.46)	(253)	(0.16)
117.30	BLACK DOUGLAS; September 24, 1959; 0235 GCT; 28°48'N, 114°56.5'W; sounding, 55 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 06°.										
0	20.02	33.75	5.20	408	0	20.02	33.75	5.20	23.82	408	0.00
10	19.37	33.64	5.23	400	10	19.37	33.64	5.23	23.92	400	0.04
30	15.34	33.57	4.75	314	20	18.50	33.61	5.19	24.10	382	0.08
50	13.12	33.62	4.66	266	30	15.34	33.57	4.75	24.82	314	0.11
74	11.72	33.77	2.63	230	50	13.12	33.62	4.66	25.32	266	0.17
					75	(11.70)	(33.78)	(2.52)	(25.72)	(228)	(0.23)
117.35	BLACK DOUGLAS; September 24, 1959; 0510 GCT; 28° 38'N, 115°16'W; sounding, 130 fm; wind, 320°, force 4; weather, missing; sea, moderate; wire angle, 14°.										
0	19.53	33.73	5.39	398	0	19.53	33.73	5.39	23.94	398	0.00
8	19.48	33.72	5.13	398	10	19.46	33.72	5.12	23.95	397	0.04
27	19.14	33.71	5.19	390	20	19.32	33.72	5.14	23.98	394	0.08
46	16.06	33.64	5.40	324	30	19.01	33.71	5.23	24.06	386	0.12
70	15.34	34.03	3.16	280	50	15.90	33.78	4.83	24.86	310	0.19
93	13.93	33.94	3.03	258	75	14.97	34.00	3.10	25.24	274	0.26
116	12.68	33.91	2.65	237	100	13.30	33.90	2.88	25.50	249	0.33
153	10.76	33.86	2.26	206	150	10.84	33.85	2.28	25.93	208	0.44
190	10.30	34.03	2.17	186	200	(10.21)	(34.06)	(2.15)	(26.20)	(183)	(0.54)

a) A strong temperature inversion was indicated by the bathythermograph observation taken one hour before the hydrographic cast.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m	

BLACK DOUGLAS; September 24, 1959; 0810 GCT; 28°28'N, 115°35.5'W; sounding, 450 fm; wind, 280°, force 4; weather, cloudy; sea, moderate; wire angle, 05°. 117.40

0	20.84	33.82	5.40	424	0	20.84	33.82	5.40	23.66	424	0.00	
9	20.88	33.78	5.45	429	10	20.88	33.78	5.46	23.61	429	0.04	
29	20.30	33.76	5.58	415	20	20.86	33.77	5.47	23.62	428	0.08	
39	18.32	33.73	6.08	369	30	20.20	33.76	5.61	23.78	412	0.13	
53	16.80	33.69	6.34	337	50	16.94	33.70	6.32	24.54	340	0.20	
68	14.54	33.68	5.50	290	75	14.09	33.70	5.20	25.18	279	0.28	
93	12.49	-	3.91		100	12.09	33.83	3.73	25.68	232	0.35	
114	11.98	33.84	3.66	229	150	10.96	33.92	2.67	25.96	205	0.46	
134	11.24	33.84	2.68	216	200	10.57	34.18	1.97	26.24	179	0.56	
154	10.91	33.94	2.66	203	250	10.11	34.29	1.41	26.40	164	0.64	
184	10.72	34.11	2.26	187	300	8.72	34.24	1.71	26.59	146	0.72	
220	10.37	34.25	1.57	170	400	7.82	34.33	0.96	26.80	126	0.86	
250	10.11	34.29	1.41	164	500	6.65	34.32	0.56	26.96	111	0.99	
300	8.72	34.24	1.71	146	600	5.99	34.38	0.35	27.08	98	1.10	
355	8.46	34.33	1.13	136								
440	7.30	34.33	0.78	119								
525	6.42	34.33	0.48	108								
609	5.95	34.39	0.34	97								

BLACK DOUGLAS; September 24, 1959; 1026 GCT; 28°18.5'N, 115°23.5'W; sounding, 140 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 05°. 118.39

0	20.15	33.74	5.13	412	0	20.15	33.74	5.13	23.78	412	0.00	
10	20.09	33.74	5.16	411	10	20.09	33.74	5.16	23.80	411	0.04	
29	18.60	33.67	4.99	380	20	18.99	33.68	5.04	24.03	389	0.08	
49	15.36	33.64	4.66	309	30	18.46	33.67	4.96	24.15	377	0.12	
74	13.10	33.63	3.99	265	50	15.24	33.64	4.64	24.89	307	0.19	
99	11.36	33.75	3.00	224	75	13.00	33.63	3.96	25.36	263	0.26	
123	11.27	33.87	2.47	214	100	11.33	33.76	2.96	25.77	224	0.32	
162	10.81	34.05	1.95	193	150	10.96	34.00	2.12	26.03	199	0.43	
201	10.32	34.21	1.36	173	200	10.33	34.21	1.37	26.30	174	0.52	

BLACK DOUGLAS; September 25, 1959; 0349 GCT; 28°40.5'N, 114°25.5'W; sounding, 42 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 06°. 118^{5}.25

0	20.26	33.77	5.54	414	0	20.26	33.77	5.54	23.77	414	0.00	
10	20.28	33.78	5.36	414	10	20.28	33.78	5.36	23.77	414	0.04	
30	16.22	33.76	5.35	319	20	17.01	33.76	5.35	24.58	336	0.08	
49	15.04	33.66	5.27	302	30	16.22	33.76	5.35	24.76	319	0.11	
74	12.57	33.67	3.27	252	50	15.03	33.66	5.26	24.95	302	0.17	
					75	(12.51)	(33.67)	(3.25)	(25.48)	(251)	(0.24)	

BLACK DOUGLAS; September 25, 1959; 0122 GCT; 28°30.5'N, 114°45.5'W; sounding, 60 fm; wind, 330°, force 5; weather, cloudy; sea, moderate; wire angle, 04°. 118^{5}.30

0	20.64	33.78	5.02	422	0	20.64	33.78	5.02	23.68	422	0.00	
10	20.66	33.78	5.11	422	10	20.66	33.78	5.11	23.68	422	0.04	
29	17.90	33.62	4.88	367	20	19.38	33.68	5.02	23.94	398	0.08	
49	13.31	33.62	3.97	270	30	16.50	33.62	4.66	24.59	336	0.12	
73	12.15	33.90	2.71	228	50	13.25	33.62	3.95	25.29	269	0.18	
98	11.32	33.91	2.15	212	75	12.17	33.92	2.66	25.74	226	0.24	
					100	(11.27)	(33.91)	(2.14)	(25.90)	(211)	(0.30)	

BLACK DOUGLAS; September 24, 1959; 2137 GCT; 28°20.5'N, 115°05'W; sounding, 65 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 03°. 118^{5}.35

0	19.30	33.62	5.88	400	0	19.30	33.62	5.88	23.91	400	0.00	
9	19.26	33.68	5.81	395	10	19.25	33.68	5.80	23.97	395	0.04	
29	18.94	33.77	5.57	380	20	19.16	33.74	5.69	24.04	388	0.08	
49	14.78	33.62	5.21	299	30	18.92	33.77	5.56	24.13	380	0.12	
74	12.64	33.62	4.09	258	50	14.70	33.62	5.20	24.99	298	0.18	
99	11.74	33.72	3.20	234	75	12.61	33.62	4.07	25.42	257	0.25	
					100	(11.73)	(33.72)	(3.17)	(25.67)	(233)	(0.32)	

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
119.33	BLACK DOUGLAS; September 24, 1959; 2320 GCT; 28°19'N, 114°53'W; sounding, 60 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.										
0	20.69	33.74	6.20	426	0	20.69	33.74	6.20	23.64	426	0.00
9	20.68	33.73	6.22	426	10	20.68	33.73	6.22	23.64	426	0.04
28	20.10	33.88	5.89	402	20	20.64	33.74	6.20	23.66	425	0.08
48	16.90	33.62	6.26	344	30	19.73	33.86	5.92	23.98	394	0.13
73	12.82	33.78	4.19	249	50	16.54	33.63	6.14	24.59	336	0.20
97	11.60	33.93	2.83	216	75	12.68	33.79	4.08	25.54	246	0.27
					100	(11.59)	(33.96)	(2.75)	(25.88)	(213)	(0.33)
120.25	BLACK DOUGLAS; September 25, 1959; 0616 GCT; 28°22.5'N, 114°15'W; sounding, 30 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 08°.										
0	20.16	33.77	5.49	410	0	20.16	33.77	5.49	23.81	410	0.00
10	20.18	33.80	5.46	409	10	20.18	33.80	5.46	23.82	409	0.04
30	16.98	33.63	5.45	344	20	17.72	33.65	5.45	24.32	361	0.08
49	15.82	33.68	5.36	316	30	16.98	33.63	5.45	24.50	344	0.11
					50	(15.78)	(33.68)	(5.35)	(24.81)	(315)	(0.18)
120.30	BLACK DOUGLAS, September 25, 1959; 0926 GCT; 28°13'N, 114°34'W; sounding, 51 fm; wind, 300°, force 5; weather, overcast; sea, rough; wire angle, 00°.										
0	20.50	33.73	5.21	422	0	20.50	33.73	5.21	23.68	422	0.00
10	20.52	33.75	5.22	421	10	20.52	33.75	5.22	23.69	421	0.04
30	20.50	33.75	5.27	421	20	20.51	33.75	5.25	23.69	421	0.08
50	16.68	33.65	5.25	337	30	20.50	33.75	5.27	23.69	421	0.13
75	13.10	33.68	4.09	261	50	16.68	33.65	5.25	24.58	337	0.20
					75	13.10	33.68	4.09	25.38	261	0.28
120.35	BLACK DOUGLAS; September 25, 1959; 1503 GCT; 28°03'N, 114°54'W; sounding, 47 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 00°.										
0	20.64	33.74	5.21	425	0	20.64	33.74	5.21	23.65	425	0.00
10	20.66	33.74	5.27	426	10	20.66	33.74	5.27	23.65	426	0.04
30	20.64	33.73	5.33	426	20	20.65	33.74	5.30	23.65	426	0.08
50	18.56	33.68	5.01	378	30	20.64	33.73	5.33	23.65	426	0.13
75	13.92	33.64	3.78	280	50	18.56	33.68	5.01	24.14	378	0.21
					75	13.92	33.64	3.78	25.17	280	0.29
120.45	BLACK DOUGLAS; September 25, 1959; 2010 GCT; 27°43'N, 115°33'W; sounding, 1106 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 07°.										
0	22.48	34.02	4.66	453	0	22.48	34.02	4.66	23.36	453	0.00
10	22.47	34.00	4.65	454	10	22.47	34.00	4.65	23.35	454	0.04
30	22.41	34.00	4.64	453	20	22.44	34.00	4.64	23.36	454	0.09
40	18.14	33.75	5.25	363	30	22.41	34.00	4.64	23.36	453	0.14
55	15.76	33.66	5.21	316	50	16.38	33.67	5.23	24.66	329	0.21
70	13.78	33.74	4.15	270	75	13.16	33.76	3.74	25.42	257	0.29
95	11.47	33.79	2.90	224	100	11.21	33.80	2.87	25.82	218	0.35
115	10.80	33.89	2.75	205	150	10.63	34.18	1.52	26.22	181	0.45
135	10.68	34.04	1.89	192	200	9.91	34.33	1.12	26.47	157	0.54
155	10.61	34.20	1.48	179	250	9.67	34.44	0.76	26.58	146	0.61
185	10.00	34.29	1.27	162	300	9.25	34.47	0.55	26.68	137	0.69
220	9.86	34.37	0.98	154	400	7.78	34.41	0.47	26.86	120	0.82
251	9.66	34.44	0.75	146	500	6.77	34.41	0.30	27.01	106	0.94
301	9.24	34.47	0.54	137	600	5.98	34.43	0.22	27.12	95	1.04
356	8.40	34.45	0.50	126							
442	7.26	34.39	0.43	114							
526	6.59	34.42	0.26	103							
611	5.88	34.43	0.21	93							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; September 25, 1959; 0715 GCT; 28°12.5'N, 114°15.5'W; sounding, 21 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 00°.											120[7].26
0	21.34	33.84	4.80	436	0	21.34	33.84	4.80	23.54	436	0.00
10	21.40	33.84	4.87	438	10	21.40	33.84	4.87	23.52	438	0.04
30	16.54	33.62	4.89	336	20	18.50	33.70	4.88	24.18	375	0.08
					30	16.54	33.62	4.89	24.59	336	0.12
BLACK DOUGLAS; September 25, 1959; 1310 GCT; 27°53'N, 114°43'W; sounding, 22 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 00°.											121[2].34
0	22.00	33.90	4.52	449	0	22.00	33.90	4.52	23.40	449	0.00
10	20.99	33.86	4.90	425	10	20.99	33.86	4.90	23.65	425	0.04
30	17.46	33.65	4.96	355	20	20.01	33.80	4.94	23.87	404	0.08
					30	17.46	33.65	4.96	24.39	355	0.12
BLACK DOUGLAS; September 25, 1959; 1116 GCT; 27°58.5'N, 114°26.5'W; sounding, 21 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 00°.											121[3].30
0	21.74	33.95	4.95	438	0	21.74	33.95	4.95	23.51	438	0.00
10	21.75	33.94	5.02	439	10	21.75	33.94	5.02	23.50	439	0.04
25	17.66	33.66	5.25	358	20	20.03	33.82	5.12	23.87	404	0.09

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
90.55-O	IX-11	0210	32°33.5'	119°37.0'	500	320°	4	partly cloudy	very rough	18.50	33.80
90.65-O	11	0820	32°13.0'	120°19.5'	2050	320°	5	partly cloudy	very rough	17.80	33.78
90.75-O	11	1505	31°52.0'	121°05.0'	2000+	320°	5	cloudy	very rough	18.22	33.55
90.85-O	11	2030	31°36.5'	121°40.0'	2000+	320°	5	partly cloudy	very rough	18.56	33.60
93.35-O	15	0052	32°36.5'	117°49.0'	450	300°	4	partly cloudy	rough	20.18	33.72
93.45-O	14	1820	32°13.0'	118°26.0'	600	320°	5	cloudy	rough	19.98	33.69
93.55-O	14	1215	31°52.0'	119°12.0'	2000+	320°	5	partly cloudy	very rough	19.84	33.78
93.65-O	14	0630	31°30.0'	119°48.0'	2000+	340°	4	clear	very rough	17.86	33.53
93.75-O	14	0032	31°14.5'	120°28.5'	2000+	340°	4	cloudy	very rough	18.58	33.51
93.85-O	13	1758	30°53.0'	121°21.0'	2000+	340°	4	cloudy	rough	18.68	33.30
110.33-B	22	1950	29°50.0'	115°52.0'	50	320°	4	partly cloudy	moderate	17.75	33.66
110.35-B	22	1830	29°46.0'	116°00.0'	740	270°	4	cloudy	moderate	20.70	33.97
110.40-B	22	1540	29°36.5'	116°19.5'	-	270°	3	cloudy	moderate	21.44	33.95
120.40-B	25	1715	27°56.5'	115°14.0'	20	320°	3	cloudy	moderate	19.63	33.91
123.37-B	26	0445	27°24.0'	114°40.0'	38	270°	3	clear	moderate	22.06	34.02
123.42-B	26	0205	27°14.0'	114°59.0'	950	340°	5	partly cloudy	rough	22.32	-
123.45-B	26	0023	27°08.0'	115°10.5'	2200	340°	5	partly cloudy	rough	23.31	34.22
127.34-B	26	0925	26°55.0'	114°06.5'	41	260°	4	clear	moderate	22.56	34.28
127.40-B	26	1220	26°43.5'	114°29.0'	1700	320°	4	partly cloudy	rough	21.78	34.23

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
127.45-B	IX-26	1445	26°33.0'	114°48.5'	1750	340°	3	partly cloudy	moderate	23.62	34.20
130.30-B	27	0225	26°29.0'	113°29.0'	43	300°	3	clear	moderate	23.37	34.26
130.35-B	27	0010	26°19.0'	113°48.0'	160	290°	4	clear	rough	22.98	34.22
130.40-B	26	2152	26°09.0'	114°07.0'	1100	320°	3	partly cloudy	moderate	22.98	33.94
130.45-B	26	1900	25°58.5'	114°26.5'	1840	320°	3	partly cloudy	moderate	23.24	34.18
133.25-B	27	0923	26°04.5'	112°48.0'	45	300°	2	clear	moderate	24.62	34.34
133.30-B	27	0700	25°54.5'	113°07.5'	108	280°	2	clear	moderate	25.13	34.45
134.36-B	27	2355	25°36.0'	113°22.5'	88	320°	4	missing	missing	-	34.64
137.23-B	27	1338	25°34.0'	112°19.0'	41	280°	3	partly cloudy	moderate	26.04	34.28
137.30-B	27	1640	25°20.0'	112°45.0'	140	300°	4	partly cloudy	moderate	26.10	34.56

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
43.42	SPENCER F. BAIRD; October 26, 1959; 2018 GCT; 41°04'N, 124°20.5'W; sounding, 92 fm; wind, 250°, force 1; weather, overcast; sea, moderate; wire angle, 05°.										
2	12.42	33.35	5.77	273	0	(12.42)	(33.35)	(5.77)	(25.25)	(273)	(0.00)
12	12.44	33.35	5.77	274	10	12.46	33.35	5.77	25.24	274	0.03
32	10.74	33.53	4.55	230	20	12.00	33.40	5.42	25.38	261	0.05
52	9.91	33.64	3.71	208	30	10.88	33.52	4.66	25.67	233	0.08
77	9.46	33.68	3.26	198	50	9.96	33.64	3.77	25.91	210	0.12
102	8.88	33.71	3.38	188	75	9.50	33.68	3.27	26.02	199	0.17
126	8.70	33.77	3.29	180	100	8.91	33.71	3.38	26.14	188	0.22
					125	8.70	33.77	3.30	26.23	180	0.27
43.45	SPENCER F. BAIRD; October 26, 1959; 1818 GCT; 40°48'N, 124°34.5'W; sounding, 330 fm; wind, 320°, force 2; weather, overcast, sea, rough; wire angle, 35°.										
1	13.34	32.95	5.92	319	0	(13.34)	(32.95)	(5.92)	(24.76)	(319)	(0.00)
10	13.30	32.95	5.87	318	10	13.30	32.95	5.87	24.77	318	0.03
26	11.23	32.98	5.39	279	20	13.00	32.95	5.78	24.84	313	0.06
33	10.64	33.10	5.11	260	30	10.72	33.06	5.17	25.34	264	0.09
42	10.48	33.24	4.89	248	50	10.47	33.40	4.77	25.65	235	0.14
49	10.48	33.40	4.79	236	75	9.35	33.54	4.07	25.94	207	0.20
57	10.27	33.46	4.57	228	100	8.79	33.58	3.96	26.06	196	0.25
66	10.15	33.53	4.33	220	125	8.24	33.74	4.00	26.26	176	0.30
77	9.19	33.55	4.04	204	150	8.20	33.87	3.82	26.38	166	0.34
88	8.89	33.58	3.98	197	200	7.83	33.98	2.34	26.52	152	0.42
104	8.74	33.58	3.95	195	250	7.37	34.08	1.83	26.66	139	0.49
124	8.24	33.73	4.00	177	300	7.16	34.11	1.51	26.72	134	0.56
146	8.21	33.86	3.86	167	400	6.45	34.12	1.06	26.82	124	0.70
183	8.01	33.93	2.62	158							
222	7.55	34.04	2.05	144							
310	7.10	34.11	1.45	132							
401	6.44	34.12	1.04	124							
43.50	SPENCER F. BAIRD; October 26, 1959; 1518 GCT; 40°48'N, 124°57'W; sounding, 1500 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 14°.										
2	14.51	32.81	5.70	353	0	(14.51)	(32.81)	(5.70)	(24.41)	(353)	(0.00)
11	14.51	32.77	5.76	356	10	14.51	32.77	5.76	24.38	356	0.04
36	12.83	32.95	5.70	310	20	14.51	32.77	5.76	24.38	356	0.07
45	11.80	33.16	5.48	276	30	14.51	32.77	5.76	24.38	356	0.11
60	11.42	33.41	5.12	251	50	11.66	33.26	5.40	25.32	266	0.17
74	10.60	33.44	4.44	234	75	10.55	33.44	4.42	25.66	234	0.23
99	9.15	33.58	3.92	201	100	9.14	33.58	3.91	26.01	200	0.29
119	8.94	33.75	3.32	185	125	8.87	33.75	3.35	26.18	184	0.34
138	8.60	33.75	3.56	180	150	8.44	33.78	3.69	26.27	176	0.38
168	8.22	33.87	3.75	166	200	7.58	33.95	3.59	26.53	151	0.46
197	7.62	33.94	3.66	152	250	7.30	34.01	2.32	26.63	142	0.54
237	7.38	34.01	2.42	144	300	6.75	34.03	2.00	26.71	134	0.61
266	7.16	34.01	2.25	140	400	5.72	34.06	1.30	26.87	119	0.74
315	6.55a)	34.04	1.88	130	500	5.31	34.16	0.88	27.00	107	0.86
380	5.84	34.05	1.43	122	600	4.83	34.23	0.52	27.10	97	0.97
479	5.40	34.14	0.96	110							
569	4.97	34.22	0.60	98							
644	4.68	34.23	0.43	95							

a) Mean value of 6.52 and 6.58°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 -5 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 -5 10 cm/g	ΔD dyn. m

SPENCER F BAIRD; October 26, 1959; 1042 GCT; 40°28.5'N, 125°43'W; sounding, 1600 fm; wind, 330°, force 5; weather, partly cloudy; sea, very rough; wire angle, 28°. 43.60

2	15.17	32.72	5.61	373	0	(15.17)	(32.72)	(5.61)	(24.20)	(373)	(0.00)
11	15.20	32.76	5.65	370	10	15.20	32.76	5.64	24.22	370	0.04
29	15.20	32.74	5.64	372	20	15.20	32.75	5.64	24.22	371	0.07
37	15.06	32.71	5.63	371	30	15.20	32.74	5.63	24.21	372	0.11
51	13.50	32.90	5.69	326	50	13.53	32.90	5.69	24.68	326	0.18
63	11.52	33.05	5.36	279	75	10.18	33.18	4.96	25.52	246	0.25
84	9.54	33.30	4.60	228	100	8.99	33.48	4.03	25.95	206	0.31
101	8.96	33.49	4.00	204	125	8.38	33.74	3.37	26.25	178	0.36
118	8.46	33.69	3.45	183	150	8.03	33.82	3.18	26.37	166	0.40
134	8.28	33.77	3.33	174	200	7.44	33.92	3.56	26.53	151	0.48
159	7.86	33.85	3.15	162	250	6.87	33.95	3.36	26.63	142	0.56
188	7.54	33.91	3.57	154	300	6.23	34.00	2.40	26.75	130	0.63
214	7.29	33.94	3.52	148	400	5.49	34.02	1.25	26.87	119	0.76
256	6.78	33.95	3.28	140	500	5.13	34.15	0.70	27.01	106	0.87
304	6.18	34.00	2.29	129							
380	5.58	34.01	1.40	121							
459	5.26	34.10	0.87	111							
541	5.00	34.18	0.58	102							

SPENCER F. BAIRD; October 26, 1959; 0534 GCT; 40°09'N, 126°27'W; sounding, 2300 fm; wind, 340°, force 6; weather, partly cloudy; sea, very rough; wire angle, 12°. 43.70

2	15.54	32.61	5.58	388	0	(15.54)	(32.61)	(5.58)	(24.04)	(388)	(0.00)
11	15.52	32.61	5.64	388	10	15.52	32.61	5.63	24.04	388	0.04
31	14.68	32.78	5.63	358	20	15.50	32.61	5.64	24.05	387	0.08
41	13.10	32.84	5.45	323	30	14.71	32.78	5.63	24.34	359	0.12
56	10.90	33.08	5.15	266	50	11.10	33.02	5.21	25.24	274	0.18
70	9.93	33.28	4.62	235	75	9.66	33.33	4.48	25.72	228	0.24
95	8.74	33.55	3.83	197	100	8.60	33.61	3.68	26.11	191	0.29
114	8.28	33.75	3.34	176	125	8.14	33.82	3.21	26.35	168	0.34
134	8.02	33.85	3.14	164	150	7.86	33.88	2.93	26.44	160	0.38
154	7.81	33.89	2.89	159	200	7.29	33.96	2.73	26.58	146	0.46
184	7.42	33.96	2.82	148	250	6.69	33.99	2.17	26.69	136	0.53
218	7.12	33.95	2.60	144	300	6.18	34.04	1.68	26.80	126	0.60
247	6.74	33.98	2.21	138	400	5.56	34.07	1.02	26.90	116	0.72
297	6.21	34.04	1.72	126	500	5.13	34.18	0.66	27.03	104	0.84
352	5.86	34.04	1.39	122	600	4.82	34.25	0.33	27.12	95	0.94
436	5.34	34.10	0.82	112							
519	5.08	34.20	0.58	102							
604	4.80	34.25	0.32	94							

SPENCER F. BAIRD: October 26, 1959; 0036 GCT; 39°48.5'N, 127°14'W; sounding, 2400 fm; wind, 330°, force 6; weather, partly cloudy; sea, very rough; wire angle, 13°. 43.80

2	15.76	32.47	5.48	403	0	(15.76)	(32.47)	(5.48)	(23.88)	(403)	(0.00)
12	15.78	32.47	5.54	404	10	15.78	32.47	5.54	23.88	404	0.04
37	14.58	32.56	5.66	372	20	15.78	32.47	5.54	23.88	404	0.08
46	12.72	32.68	6.08	328	30	15.40	32.49	5.63	23.98	394	0.12
61	12.56	33.00	5.59	301	50	12.46	32.77	5.93	24.80	316	0.19
75	11.21	33.12	5.22	269	75	11.21	33.12	5.22	25.29	269	0.26
100	9.28	33.30	4.33	224	100	9.28	33.30	4.33	25.76	224	0.33
119	8.92	33.57	3.87	198	125	8.80	33.59	3.83	26.06	196	0.38
139	8.50	33.64	3.69	187	150	8.25	33.69	3.57	26.23	180	0.43
168	7.86	33.80	3.40	166	200	7.52	33.88	3.69	26.48	156	0.51
197	7.56	33.87	3.71	156	250	6.85	33.95	2.88	26.63	142	0.59
236	7.02	33.93	3.03	145	300	6.31	33.98	2.22	26.72	132	0.66
265	6.68	33.96	2.68	138	400	5.44	34.03	1.21	26.88	118	0.79
313	6.17	33.98	2.07	130	500	4.89	34.14	0.68	27.03	104	0.91
377	5.60	34.00	1.42	122	600	4.47	34.18	0.48	27.11	96	1.01
475	5.01	34.13	0.77	106							
563	4.62	34.16	0.56	100							
639	4.36	34.23	0.43	91							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

43.90 SPENCER F. BAIRD; October 25, 1959; 1942 GCT; 39°28'N, 127°58'W; sounding, 2300 fm; wind, 020°, force 6; weather, cloudy; sea, very rough; wire angle, 13°.

4	17.18	32.47	5.34	434	0	(17.18)	(32.47)	(5.34)	(23.56)	(434)	(0.00)
13	17.20	32.47	5.39	434	10	17.20	32.47	5.38	23.56	434	0.04
38	15.86	32.68	5.61	390	20	17.20	32.48	5.40	23.56	434	0.09
48	14.85	32.66	5.70	370	30	16.45	32.59	5.52	23.81	410	0.13
62	13.35	32.70	5.84	338	50	14.45	32.65	5.74	24.30	363	0.21
77	12.54	32.96	5.92	304	75	12.68	32.94	5.92	24.89	307	0.29
101	10.44	32.97	5.46	267	100	10.48	32.95	5.50	25.29	269	0.36
120	9.66	33.23	4.96	235	125	9.50	33.28	4.86	25.71	229	0.43
139	9.11	33.37	4.64	216	150	8.78	33.45	4.46	25.96	205	0.48
169	8.26	33.71	4.14	179	200	7.74	33.87	3.77	26.45	159	0.58
197	7.80	33.86	3.81	161	250	7.08	33.95	3.32	26.60	144	0.65
235	7.26	33.93	3.46	148	300	6.51	33.99	2.57	26.71	134	0.72
264	6.92	33.97	3.08	141	400	5.69	34.03	1.46	26.85	121	0.86
312	6.38	33.99	2.41	132	500	5.16	34.09	0.88	26.96	110	0.98
376	5.82	34.01	1.61	124	600	4.68	34.20	0.52	27.10	97	1.09
472	5.32	34.07	1.03	114							
560	4.83	34.15	0.64	102							
635	4.56	34.23	0.43	93							

50.47 SPENCER F. BAIRD; October 24, 1959; 1057 GCT; 39°46'N, 123°54'W; sounding, 58 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 00°.

1	12.08	33.39	5.60	264	0	(12.08)	(33.39)	(5.60)	(25.34)	(264)	(0.00)
11	11.54	33.40	5.23	254	10	11.65	33.39	5.34	25.43	256	0.03
31	10.80	33.58	3.84	228	20	10.63	33.43	4.30	25.65	235	0.05
51	10.80	33.68	3.49	220	30	10.79	33.57	3.85	25.72	228	0.07
76	10.55	33.68	4.28	216	50	10.80	33.67	3.50	25.80	221	0.12
					75	10.56	33.68	4.27	25.85	216	0.17

50.50 SPENCER F. BAIRD; October 24, 1959; 1244 GCT; 39°40'N, 124°07.5'W; sounding, 510 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 15°.

2	13.54	33.01	5.93	319	0	(13.54)	(33.01)	(5.93)	(24.76)	(319)	(0.00)
11	13.51	33.03	6.06	317	10	13.52	33.03	6.05	24.79	317	0.03
31	11.27	33.14	5.33	268	20	12.05	33.14	5.62	25.16	281	0.06
40	10.91	33.16	5.10	261	30	11.31	33.14	5.35	25.29	269	0.09
55	10.21	33.30	4.71	239	50	10.44	33.25	4.85	25.53	246	0.14
69	9.63	33.34	4.33	226	75	9.53	33.38	4.15	25.80	221	0.20
92	9.37	33.58	3.67	204	100	9.19	33.66	3.52	26.06	196	0.25
112	8.63	33.68	3.52	186	125	8.27	33.72	3.67	26.25	178	0.30
130	8.20	33.74	3.67	175	150	8.33	33.81	3.28	26.31	172	0.34
149	8.34	33.78	3.23	175	200	7.50	33.93	3.78	26.53	151	0.43
177	7.80	33.86	3.69	161	250	7.10	33.96	3.64	26.60	144	0.50
211	7.39	33.96	3.78	148	300	6.67	33.99	2.80	26.68	137	0.57
240	7.20	33.96	3.71	145	400	6.06	34.12	1.34	26.87	119	0.70
288	6.76	33.97	3.01	139							
342	6.40	34.02	2.10	130							
424	5.94	34.16	1.06	114							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 24, 1959; 1618, 1635 GCT; 39°29.5'N, 124°29'W; sounding, 1300 fm; wind, 340°, force 4; weather, overcast; sea, very rough; wire angle, 35°, 35°. 50.55

1	15.62	32.65	5.57	387	0	(15.62)	(32.65)	(5.57)	(24.05)	(387)	(0.00)
					10	15.77	32.66	5.58	24.02	390	0.04
11	15.77	32.66	5.59	390	20	15.67	32.67	5.60	24.05	387	0.08
34	15.38	32.70	5.60	378	30	15.48	32.69	5.60	24.12	381	0.12
60	11.34	32.79	5.78	295	50	13.75	32.67	5.68	24.46	348	0.19
68	10.72	32.80	5.63	284	75	10.12	32.88	5.41	25.30	268	0.27
85	9.78	33.03	5.10	251	100	9.53	33.21	4.73	25.65	235	0.33
97	9.60	33.17	4.84	238	125	8.73	33.52	4.23	26.02	199	0.38
109	9.25	33.31	4.49	223	150	8.51	33.83	3.64	26.30	173	0.43
133	8.60	33.65	4.06	188	200	7.77	33.96	4.02	26.51	153	0.52
148	8.53	33.82	3.62	174	250	7.32	34.06	2.26	26.66	139	0.59
170	8.26	33.86	3.81	167	300	6.82	34.07	1.71	26.73	132	0.66
196	7.84	33.96	4.03	154	400	6.07	34.12	1.10	26.87	119	0.79
218	7.46	33.98	3.94	147	500	5.48	34.19	0.72	27.01	106	0.91
255	7.30	34.07	2.16	138							
305	6.78	34.07	1.64	131							
391	6.14	34.11	1.16	120							
474	5.60	34.17	0.80	109							
546	5.30	34.24	0.54	101							

SPENCER F. BAIRD; October 24, 1959; 1937 GCT; 39°20'N, 124°52'W; sounding, 1600 fm; wind, 010°, force 6; weather, fog; sea, high; wire angle, 37°. 50.60

1	15.56	32.72	5.55	381	0	(15.56)	(32.72)	(5.55)	(24.11)	(381)	(0.00)
10	15.56	32.73	5.61	380	10	15.56	32.73	5.61	24.12	380	0.04
30	15.52	32.74	5.62	378	20	15.54	32.74	5.61	24.13	379	0.08
37	15.20	32.77	5.67	370	30	15.52	32.74	5.62	24.14	378	0.11
49	14.10	32.86	5.68	341	50	14.09	32.87	5.67	24.54	340	0.19
62	13.58	32.92	5.60	326	75	12.88	32.91	5.67	24.83	313	0.27
81	12.57	32.90	5.68	309	100	11.12	32.87	5.60	25.12	285	0.34
96	11.49	32.86	5.67	293	125	10.15	33.38	4.54	25.68	232	0.41
112	10.80	33.09	5.18	264	150	9.52	33.64	3.54	26.00	202	0.46
136	9.91	33.46	4.34	222	200	8.49	33.87	3.50	26.33	170	0.56
159	9.29	33.73	3.24	192	250	7.64	33.98	4.08	26.55	149	0.64
191	8.64	33.82	3.23	176	300	6.86	33.98	3.48	26.66	139	0.72
215	8.25	33.96	4.11	160	400	5.64	34.01	2.04	26.83	123	0.85
255	7.56	33.98	4.07	148	500	5.17	34.12	0.96	26.98	108	0.97
308	6.74	33.98	3.36	138							
394	5.68	34.00	2.11	124							
477	5.30	34.10	1.10	112							
549	4.88	34.17	0.77	102							

SPENCER F. BAIRD; October 25, 1959; 0017 GCT; 39°00'N, 125°39'W; sounding, 2100 fm; wind, 010°, force 6; weather, cloudy, sea, high; wire angle, 05°. 50.70

3	15.79	32.48	5.51	403	0	(15.79)	(32.48)	(5.51)	(23.88)	(403)	(0.00)
13	15.80	32.47	5.60	404	10	15.80	32.47	5.56	23.87	404	0.04
38	14.97	32.48	5.72	386	20	15.80	32.46	5.61	23.87	404	0.08
47	13.48	32.65	5.84	344	30	15.76	32.49	5.64	23.90	402	0.12
62	11.85	32.70	5.93	311	50	13.42	32.67	5.85	24.53	342	0.20
77	10.11	32.88	5.36	268	75	10.35	32.85	5.47	25.24	274	0.27
102	9.30	33.40	4.21	217	100	9.40	33.31	4.36	25.76	225	0.34
121	8.65	33.62	3.83	191	125	8.55	33.66	3.71	26.17	186	0.39
141	8.28	33.78	3.30	174	150	8.14	33.81	3.16	26.34	169	0.43
170	7.89	33.87	2.90	161	200	7.54	33.93	2.67	26.52	152	0.52
200	7.54	33.93	2.67	152	250	7.03	33.97	2.42	26.63	142	0.59
239	7.18	33.96	2.50	145	300	6.51	34.01	1.98	26.73	132	0.66
268	6.81	34.01	2.24	136	400	5.70	34.09	1.19	26.89	117	0.79
318	6.37	34.01	1.87	131	500	5.02	34.15	0.68	27.02	105	0.91
381	5.83	34.07	1.35	120	600	4.57	34.18	0.43	27.10	97	1.01
481	5.13	34.13	0.77	107							
569	4.71	34.16	0.51	100							
644	4.41	34.24	0.35	91							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

50.80 SPENCER F. BAIRD; October 25, 1959; 0459 GCT; 38°41'N, 126°24'W; sounding, 2350 fm; wind, 010°, force 6; weather, cloudy; sea, high; wire angle, 26°.

2	17.33	32.78	5.31	415	0	(17.33)	(32.78)	(5.31)	(23.76)	(415)	(0.00)
11	17.36	32.78	5.34	416	10	17.35	32.78	5.33	23.75	416	0.04
30	17.33	32.79	5.32	414	20	17.36	32.79	5.33	23.76	415	0.08
56	16.96	32.91	5.38	397	30	17.33	32.79	5.32	23.77	414	0.12
64	16.58	32.91	5.39	389	50	16.98	32.91	5.37	23.93	398	0.21
78	13.60	32.94	6.01	325	75	14.30	32.93	5.90	24.55	340	0.30
90	12.26	32.92	5.83	302	100	11.60	32.95	5.62	25.09	288	0.38
103	11.40	32.97	5.53	283	125	10.52	33.30	4.96	25.56	244	0.45
125	10.52	33.30	4.96	244	150	9.60	33.45	4.62	25.83	218	0.50
142	9.88	33.39	4.66	227	200	8.49	33.81	4.30	26.29	174	0.60
168	9.00	33.59	4.58	198	250	7.92	33.96	4.03	26.49	155	0.69
194	8.56	33.78	4.33	178	300	7.10	33.97	3.35	26.62	143	0.77
220	8.32	33.93	4.29	163	400	5.79	34.03	1.82	26.84	122	0.90
263	7.73	33.97	3.88	151	500	5.17	34.11	0.98	26.97	109	1.03
312	6.90	33.96	-	141							
386	5.92	34.01	2.08	125							
464	5.37	34.08	1.21	114							
546	4.90	34.14	0.76	104							

50.90 SPENCER F. BAIRD; October, 25, 1959; 0950, 1028, 1051 GCT; 38°19'N, 127°10'W; sounding, 2450 fm; wind, 010°, force 6; weather, overcast; sea, high; wire angle, 45°, 55°, 45°.

1	17.03	32.40	5.38	436	0	(17.03)	(32.40)	(5.38)	(23.54)	(436)	(0.00)
9	17.00	32.36	5.38	438	10	17.00	32.36	5.38	23.52	438	0.04
26	16.95	32.38	5.38	435	20	16.99	32.37	5.38	23.53	437	0.09
32	16.59	32.34	5.45	430	30	16.70	32.35	5.44	23.58	432	0.13
41	16.48	32.48	5.42	418	50	16.00	32.79	5.56	24.07	385	0.21
51	15.92	32.81	5.56	381	75	13.05	32.83	5.76	24.72	323	0.30
67	13.42	32.75	5.70	336	100	11.18	32.89	5.63	25.12	285	0.38
80	12.72a)	32.89	5.79	312	125	10.74	33.13	5.30	25.39	260	0.45
92	11.70	32.87	5.74	295	150	9.71	33.48	4.61	25.84	217	0.51
110	10.98	32.95	5.52	276	200	8.70	33.81	3.72	26.25	178	0.61
127	10.72	33.16	5.24	257	250	8.12	33.96	2.82	26.46	158	0.70
					300	7.05	33.98	3.37	26.64	141	0.77
158	9.36	33.57	4.49	205	400	(5.61)	(33.98)	(2.15)	(26.82)	(124)	(0.91)
182	8.92	33.73	4.12	186							
250	8.12	33.96	2.82	158							
306	6.94	33.98	3.38	140							
393	5.70	33.98	2.24	125							

53.52 SPENCER F. BAIRD; October 24, 1959; 0634 GCT; 39°02'N, 123°51.5'W; sounding, 50 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 09°.

2	13.11	33.12	5.97	303	0	(13.11)	(33.12)	(5.97)	(24.94)	(303)	(0.00)
11	12.86	33.17	5.99	294	10	12.89	33.16	5.99	25.02	295	0.03
31	11.31	33.46	4.81	245	20	11.90	33.31	5.53	25.32	266	0.06
51	10.84	33.53	4.29	232	30	11.33	33.45	4.84	25.53	246	0.08
76	10.30	33.73	3.12	208	50	10.86	33.53	4.31	25.67	233	0.13
					75	10.32	33.73	3.13	25.92	209	0.19

a) Alternate value, 12.49°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 24, 1959; 0435 GCT; 38°56'N, 124°04.5'W; sounding, 650 fm; wind, 340°, force 5; weather, clear; sea, rough; wire angle, 10°. 53.55

2	13.76	32.94	5.99	328	0	(13.76)	(32.94)	(5.99)	(24.67)	(328)	(0.00)
12	13.70	32.95	5.95	326	10	13.71	32.95	5.96	24.68	327	0.03
36	12.20	33.10	5.64	287	20	12.65	33.09	5.77	25.01	296	0.06
46	11.98	33.08	5.51	285	30	12.31	33.11	5.68	25.08	289	0.09
61	10.93	33.15	5.11	261	50	11.45	33.09	5.32	25.23	275	0.15
76	10.04	33.33	4.70	234	75	10.07	33.33	4.71	25.66	234	0.21
101	9.28	33.55	4.28	205	100	9.29	33.54	4.28	25.95	206	0.27
121	8.84	33.68	4.31	189	125	8.72	33.72	4.30	26.18	185	0.32
140	8.36	33.78	4.17	175	150	8.20	33.83	3.98	26.34	169	0.36
170	7.95	33.89	3.70	161	200	7.60	33.96	3.81	26.53	151	0.44
200	7.60	33.96	3.81	151	250	6.98	33.99	3.38	26.65	140	0.52
239	7.12	33.99	3.47	142	300	6.39	34.01	2.67	26.74	131	0.59
269	6.75	34.00	3.18	136	400	5.47	34.05	1.70	26.89	117	0.72
319	6.16	34.02	2.38	127	500	5.33	34.16	0.73	27.00	107	0.83
385	5.51	34.04	1.91	118							
483	5.40	34.14	0.82	110							
573	5.01	34.27	0.47	96							

SPENCER F. BAIRD; October 24, 1959; 0144 GCT; 38°46'N, 124°27'W; sounding, 1900 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 25°. 53.60

2	13.24	33.13	6.03	304	0	(13.24)	(33.13)	(6.03)	(24.92)	(304)	(0.00)
12	13.24	33.13	6.20	304	10	13.24	33.13	6.17	24.92	304	0.03
35	10.68	33.31	4.84	246	20	12.33	33.17	5.79	25.13	284	0.06
43	10.32	33.34	4.73	237	30	11.11	33.27	5.04	25.43	256	0.09
56	9.80	33.42	4.47	223	50	9.95	33.38	4.57	25.72	228	0.14
69	9.39	33.57	4.04	205	75	9.12	33.61	3.84	26.04	198	0.19
90	9.00	33.62	3.78	196	100	8.68	33.65	3.75	26.13	189	0.24
106	8.56	33.68	3.72	185	125	8.43	33.80	3.22	26.28	175	0.28
123	8.46	33.78	3.25	177	150	8.18	33.96	2.90	26.46	158	0.33
148	8.20	33.96	2.94	159	200	7.53	33.95	2.87	26.54	150	0.40
172	7.90	33.95	2.80	155	250	7.21	34.05	1.90	26.66	139	0.48
204	7.48	33.96	2.87	149	300	6.70	34.09	1.58	26.76	129	0.55
229	7.30	33.99	2.36	144	400	5.65	34.06	1.30	26.87	119	0.67
269	7.09	34.09	1.61	134	500	4.83	34.10	1.03	27.00	106	0.79
323	6.42	34.09	1.55	125							
410	5.56	34.05	1.26	118							
493	4.86	34.09	1.05	107							
566	4.80	34.24	0.45	95							

SPENCER F. BAIRD; October 23, 1959; 1602 GCT; 38°30'N, 123°22'W; sounding, 60 fm; wind, 330°, force 2; weather, clear; sea, moderate; wire angle, 04°. 57.51

2	11.44	33.67	4.29	232	0	(11.44)	(33.67)	(4.29)	(25.68)	(232)	(0.00)
12	11.41	33.68	4.33	231	10	11.42	33.68	4.33	25.69	231	0.02
32	10.93	33.68	3.65	222	20	11.28	33.68	4.23	25.71	229	0.05
52	10.20	33.75	2.97	205	30	11.00	33.68	3.75	25.77	223	0.07
77	9.84	33.78	2.65	198	50	10.25	33.75	3.03	25.95	206	0.11
					75	9.86	33.78	2.67	26.04	198	0.16

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm/g	ΔD dyn. m

57.55 SPENCER F. BAIRD; October 23, 1959; 1820 GCT; 38°21.5'N, 123°40'W; sounding, 500 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 14°.

2	13.15	33.44	5.67	280	0	(13.15)	(33.44)	(5.67)	(25.17)	(280)	(0.00)
11	12.98	33.44	5.71	276	10	13.00	33.44	5.70	25.21	277	0.03
31	12.48	33.39	5.44	272	20	12.87	33.43	5.66	25.23	275	0.06
60	10.92	33.40	4.86	243	30	12.51	33.39	5.45	25.26	272	0.08
70	10.34	33.45	4.22	229	50	12.40	33.49	5.25	25.37	262	0.14
84	9.60	33.55	3.99	210	75	10.12	33.49	4.14	25.78	223	0.20
99	9.02	33.68	3.71	192	100	9.00	33.69	3.67	26.11	191	0.25
113	8.96	33.79	3.26	182	125	9.00	33.87	2.62	26.26	177	0.30
137	9.04	33.96a)	2.27	171	150	8.92	34.01	2.30	26.37	166	0.34
156	8.84	34.02a)	2.33	164	200	8.27	34.09	2.00	26.53	151	0.42
185	8.56	34.08	1.87	155	250	7.99	34.13	1.72	26.62	143	0.49
213	8.10	34.10	2.07	147	300	7.63	34.14	1.41	26.67	138	0.57
242	8.02	34.13	1.81	144	400	6.55	34.13	1.20	26.82	124	0.70
289	7.74	34.14	1.42	139	500	5.99	34.22	0.67	26.97	110	0.82
343	7.11	34.12	1.39	132	600	(5.36)	(34.29)	(0.42)	(27.10)	(97)	(0.93)
425	6.36	34.14	1.11	121							
508	5.94	34.23	0.63	109							
591	5.42	34.29	0.42	99							

57.60 SPENCER F. BAIRD; October 23, 1959; 2104 GCT; 38°12'N, 124°01.5'W; sounding, 1950 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 27°.

2	14.34	32.94	5.78	340	0	(14.34)	(32.94)	(5.78)	(24.55)	(340)	(0.00)
11	14.26	32.94	5.81	338	10	14.26	32.94	5.80	24.57	338	0.03
28	13.30	33.07	5.72	310	20	13.94	32.94	5.81	24.63	332	0.07
37	12.46	33.04	5.63	297	30	13.27	33.08	5.71	24.87	309	0.10
50	12.79	33.35	5.38	279	50	12.79	33.35	5.38	25.18	279	0.16
63	12.40	33.35	5.31	273	75	11.88	33.43	4.86	25.40	258	0.23
83	10.70	33.35	4.50	243	100	9.72	33.46	4.17	25.82	219	0.29
99	9.75	33.45	4.19	220	125	9.14	33.66	3.53	26.07	195	0.34
114	9.25	33.58	3.86	203	150	8.80	33.83	3.16	26.25	178	0.39
130	9.09	33.69	3.43	192	200	8.33	34.03	2.15	26.48	156	0.47
154	8.72	33.86	3.07	174	250	8.09	34.14	1.42	26.60	144	0.55
182	8.39	33.98	2.77	160	300	7.57	34.14	1.26	26.68	137	0.62
206	8.32	34.04	1.91	155	400	6.64	34.23	0.89	26.88	118	0.75
246	8.13	34.13	1.46	145	500	5.98	34.24	0.55	26.99	108	0.87
292	7.64	34.14	1.29	138							
365	7.02	34.22	1.02	124							
444	6.23	34.22	0.75	114							
526	5.87	34.27	0.45	105							

60.55 SPENCER F. BAIRD; October 23, 1959; 1034 GCT; 37°47.5'N, 123°15.5'W; sounding, 60 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 02°.

2	13.50	33.57	6.00	276	0	(13.50)	(33.57)	(6.00)	(25.22)	(276)	(0.00)
12	13.50	33.55	6.03	278	10	13.50	33.55	6.02	25.20	278	0.03
32	12.96	33.59	4.63	265	20	13.49	33.55	6.00	25.20	278	0.06
52	11.71	33.67	3.54	236	30	13.09	33.59	4.86	25.30	268	0.08
77	11.30	33.68	3.37	229	50	11.74	33.67	3.55	25.63	237	0.13
					75	11.33	33.68	3.38	25.71	229	0.19

a) Salinity samples at 137 and 156 meters appear to have been reversed; they are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 23, 1959; 0732, 0801 GCT; 37°37'N, 123°37'W; sounding, 1700 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 25°, 27°. 60.60

2	14.44	33.48	5.74	302	0	(14.44)	(33.48)	(5.74)	(24.95)	(302)	(0.00)
11	14.46	33.49	5.74	302	10	14.46	33.49	5.74	24.95	302	0.03
34	11.44	33.22	4.94	265	20	14.40	33.49	5.72	24.96	301	0.06
43	10.94	33.33	4.70	248	30	11.92	33.20	5.09	25.23	275	0.09
56	10.22	33.42	4.28	230	50	10.53	33.38	4.40	25.62	238	0.14
69	9.86	33.44	4.17	222	75	9.74	33.51	3.96	25.85	216	0.20
91	9.43	33.64	3.38	201	100	9.02	33.64	3.38	26.07	195	0.25
109	8.66	33.69	3.49	186	125	8.50	33.87	3.02	26.33	170	0.30
126	8.50	33.87	3.02	170	150	8.25	33.96	2.83	26.44	160	0.34
154	8.22	33.98	2.82	158	200	7.69	34.03	2.68	26.58	146	0.42
180	7.95	34.02	2.82	151	250	7.29	34.12	1.68	26.70	135	0.49
215	7.52	34.05	2.43	143	300	6.66	34.11	1.57	26.78	127	0.55
241	7.39	34.11	1.74	137	400	6.13	34.17	0.84	26.90	116	0.68
286	6.82	34.11	1.61	129	500	5.68	34.20	0.57	26.98	108	0.80
346	6.29	34.12	1.30	122	600	(4.92)	(34.27)	(0.31)	(27.12)	(95)	(0.90)
438	6.04	34.21	0.52	112							
523	5.54	34.20	0.59	106							
592	5.00	34.25	0.31	97							

SPENCER F. BAIRD; October 23, 1959; 0216 GCT; 37°19'N, 124°21'W; sounding, 2150 fm; wind, 320°, force 5; weather, fog; sea, rough; wire angle, 25°. 60.70

3	15.92	33.31	5.56	345	0	(15.92)	(33.31)	(5.56)	(24.49)	(345)	(0.00)
9	15.93	33.33	5.56	344	10	15.93	33.33	5.56	24.50	344	0.03
19	15.93	33.32	5.56	345	20	15.93	33.32	5.56	24.49	345	0.07
42	13.10	33.29	5.44	290	30	15.85	33.32	5.56	24.51	343	0.10
51	11.24	33.33	4.95	254	50	11.30	33.33	4.98	25.44	255	0.16
65	10.03	33.37	4.33	231	75	9.43	33.50	4.00	25.90	211	0.22
78	9.28	33.54	3.92	206	100	8.87	33.71	3.43	26.16	187	0.27
100	8.87	33.71	3.43	187	125	8.61	33.80	3.17	26.26	177	0.32
119	8.67	33.77	3.21	180	150	8.22	33.89	2.87	26.38	165	0.36
136	8.42	33.84	3.04	171	200	7.90	34.03	2.63	26.54	150	0.44
163	8.18	33.95	2.78	160	250	7.38	34.05	2.09	26.64	141	0.52
189	7.96	34.00	2.77	152	300	6.75	34.07	1.81	26.74	131	0.59
224	7.70	34.04	2.28	146	400	5.74	34.09	1.27	26.89	117	0.71
296	6.81	34.07	1.83	132	500	5.20	34.19	0.64	27.03	104	0.83
356	6.16	34.07	1.60	124	600	4.87	34.27	0.38	27.12	94	0.93
449	5.38	34.13	0.88	110							
535	5.07	34.22	0.50	100							
609	4.84	34.28	0.37	93							

SPENCER F. BAIRD; October 22, 1959; 2050 GCT; 36°58'N, 125°08'W; sounding, 2450 fm; wind, 330°, force 3; weather, fog; sea, rough; wire angle, 17°. 60.80

2	15.86	33.38	5.53	339	0	(15.86)	(33.38)	(5.53)	(24.56)	(339)	(0.00)
11	15.86	33.40	5.56	338	10	15.86	33.40	5.55	24.57	338	0.03
30	13.98	33.37	5.59	301	20	15.30	33.40	5.58	24.69	326	0.07
40	12.90	33.26	5.40	288	30	13.98	33.37	5.59	24.96	301	0.10
54	10.94	33.43	4.46	241	50	11.98	33.33	4.95	25.32	266	0.16
68	9.84	33.44	4.23	223	75	9.64	33.47	4.17	25.84	217	0.22
92	9.16	33.57	3.90	202	100	8.92	33.66	3.57	26.11	191	0.27
110	8.70	33.75	3.26	182	125	8.51	33.83	3.12	26.30	173	0.31
129	8.48	33.86	3.06	170	150	8.39	33.96	2.77	26.42	162	0.36
147	8.41	33.95	2.76	163	200	7.65	34.01	2.57	26.57	148	0.43
174	8.02	33.98	2.81	155	250	7.08	34.07	2.04	26.70	135	0.51
207	7.56	34.02	2.50	145	300	6.69	34.11	1.60	26.78	127	0.57
234	7.18	34.06	2.28	137	400	5.83	34.16	0.94	26.94	113	0.70
281	6.89	34.09	1.72	131	500	5.54	34.28	0.47	27.07	101	0.81
332	6.29	34.13	1.45	121							
412	5.77	34.17	0.84	111							
494	5.56	34.27	0.48	101							
577	5.14	34.33	0.37	92							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

60.90 SPENCER F. BAIRD; October 22, 1959; 1613 GCT; 36°36'N, 125°46'W; sounding, 2450 fm; wind, 320°, force 2; weather, fog; sea, rough; wire angle, 17°.

2	16.84	32.71	5.41	409	0	(16.84)	(32.71)	(5.41)	(23.82)	(409)	(0.00)
11	16.83	32.69	5.42	410	10	16.83	32.69	5.41	23.81	410	0.04
30	16.42	32.76	5.62	397	20	16.82	32.69	5.43	23.81	410	0.08
40	15.86	32.81	5.60	381	30	16.42	32.76	5.62	23.95	397	0.12
54	14.02	32.93	5.93	334	50	14.40	32.87	5.87	24.48	346	0.20
67	12.71	32.99	5.90	304	75	12.33	33.00	5.79	24.99	298	0.28
91	11.74	33.01	5.54	286	100	11.33	33.16	5.36	25.31	267	0.35
109	10.94	33.26	5.24	254	125	10.25	33.31	5.00	25.61	239	0.41
127	10.16	33 32	4.96	236	150	9.17	33.60	4.73	26.02	200	0.47
146	9.28	33.57	4.78	204	200	8.50	33.85	4.37	26.32	172	0.56
173	8.80	33.71	4.48	186	250	7.83	33.98	4.00	26.52	152	0.65
205	8.43	33.87	4.37	169	300	6.95	33.99	2.85	26.65	140	0.72
232	8.12	33.96	4.36	158	400	6.30	34.10	1.35	26.82	123	0.86
278	7.30	33.99	2.97	144	500	5.40	34.15	0.80	26.98	108	0.98
330	6.57	33.99	2.72	135							
409	6.25	34.11	1.28	122							
490	5.42	34.14	0.84	110							
574	5.38	34.28	0.38	98							

63.52 SPENCER F. BAIRD; October 21, 1959; 1719 GCT; 37°19'N, 122°36.5'W; sounding, 50 fm; wind, 310°, force 2; weather, cloudy; sea, rough; wire angle, 02°.

2	14.02	33.54	5.62	290	0	(14.02)	(33.54)	(5.62	(25.07)	(290)	(0.00)
12	13.96	33.53	5.49	289	10	13.97	33.53	5.53	25.08	289	0.03
32	12.74	33.66	4.06	256	20	13.93	33.53	5.42	25.09	288	0.06
52	11.00	33.70	3.02	222	30	12.95	33.64	4.25	25.38	260	0.09
77	10.68	33.71	2.78	216	50	11.04	33.70	3.05	25.78	223	0.13
					75	10.70	33.71	2.81	25.85	216	0.19

63.60 SPENCER F. BAIRD; October 21, 1959; 2116 GCT; 37°02.5'N, 123°12'W; sounding, 1450 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°.

1	15.84	33.30	5.45	345	0	(15.84)	(33.30)	(5.45)	(24.50)	(345)	(0.00)
11	15.82	33.28	5.47	346	10	15.82	33.28	5.47	24.49	346	0.03
30	15.76	33.28	5.48	344	20	15.78	33.28	5.48	24.50	345	0.07
39	14.86	33.37	5.55	319	30	15.76	33.28	5.48	24.50	344	0.10
54	12.85	33.28	5.47	286	50	13.41	33.28	5.52	25.00	296	0.17
67	11.72	33.37	4.92	258	75	10.91	33.42	4.54	25.59	241	0.23
90	10.13	33.44	4.22	226	100	9.78	33.56	3.80	25.89	212	0.29
108	9.46	33.62	3.59	203	125	8.73	33.66	3.99	26.13	189	0.34
126	8.72	33.66	3.99	189	150	8.46	33.82	3.32	26.30	173	0.39
143	8.49	33.78	3.50	176	200	8.18	34.01	2.87	26.49	155	0.47
169	8.40	33.91	2.93	166	250	7.52	34.05	2.54	26.62	143	0.55
200	8.18	34.01	2.87	155	300	6.79	34.06	2.02	26.74	132	0.62
227	7.93	34.06	2.68	148	400	6.01	34.16	1.02	26.91	115	0.75
271	7.16	34.04	2.41	138	500	5.03	34.17	0.75	27.04	103	0.86
320	6.56	34.09	1.74	127							
397	6.03	34.16	1.04	116							
477	5.16	34.16	0.83	105							
560	4.83	34.20	0.40	99							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 22, 1959; 0134 GCT; 36°42.5'N, 123°57'W; sounding, 2100 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 10°. 63.70

2	15.98	33.20	5.55	354	0	(15.98)	(33.20)	(5.55)	(24.40)	(354)	(0.00)
11	15.90	33.19	5.59	354	10	15.91	33.19	5.59	34.40	354	0.04
31	15.84	33.21	5.49	351	20	15.87	33.20	5.54	24.42	352	0.07
41	14.56	33.41	5.37	310	30	15.85	33.21	5.50	24.42	352	0.11
56	10.98	33.26	4.84	254	50	12.00	33.29	5.09	25.29	269	0.17
71	10.23	33.35	4.38	235	75	10.03	33.38	4.26	25.70	230	0.23
96	9.18	33.52	3.94	206	100	8.99	33.56	3.93	26.02	200	0.28
115	8.50	33.66	3.93	186	125	8.39	33.69	3.90	26.21	182	0.33
135	8.30	33.73	3.88	177	150	8.09	33.78	3.55	26.32	171	0.38
155	8.02	33.79	3.40	170	200	7.48	33.96	2.79	26.56	149	0.46
185	7.62	33.92	2.96	154	250	6.93	34.04	1.98	26.70	135	0.53
220	7.27	34.00	2.57	143	300	6.71	34.13	1.30	26.80	126	0.60
249	6.94	34.04	2.02	136	400	5.60	34.11	0.95	26.92	114	0.72
299	6.72	34.13	1.31	126	500	5.03	34.19	0.60	27.06	102	0.84
354	6.02	34.09	1.21	120	600	4.65	34.26	0.37	27.16	92	0.94
438	5.35	34.14	0.75	109							
523	4.94	34.21	0.56	99							
608	4.62	34.27	0.36	91							

SPENCER F. BAIRD; October 22, 1959; 0556 GCT; 36°23'N, 124°37'W; sounding, 2175 fm; wind, 300°, force 3; weather, fog; sea, moderate; wire angle, 08°. 63.80

2	15.96	33.40	5.41	340	0	(15.96)	(33.40)	(5.41)	(24.55)	(340)	(0.00)
12	15.92	33.44	5.49	336	10	15.93	33.44	5.48	24.59	336	0.03
31	15.64	33.42	5.50	331	20	15.80	33.43	5.50	24.61	334	0.07
61	10.68	33.34	4.78	243	30	15.65	33.42	5.50	24.63	332	0.10
71	10.32	33.40	4.48	233	50	12.35	33.36	5.13	25.27	271	0.16
86	9.62	33.54	3.87	211	75	10.12	33.45	4.27	25.74	226	0.22
101	9.28	33.60	3.81	202	100	9.31	33.59	3.81	25.99	202	0.28
116	8.72	33.71	3.42	185	125	8.58	33.81	3.14	26.27	176	0.33
141	8.42	33.93	2.76	164	150	8.32	33.94	2.70	26.42	162	0.37
160	8.20	33.96	2.67	159	200	7.65	34.04	2.77	26.59	145	0.45
190	7.76	34.04	2.84	146	250	7.23	34.05	1.77	26.66	139	0.52
220	7.45	34.04	2.34	143	300	6.73	34.11	1.27	26.78	128	0.59
249	7.24	34.05	1.79	139	400	6.10	34.18	0.80	26.92	114	0.71
299	6.74	34.11	1.28	128	500	5.43	34.23	0.52	27.03	104	0.83
355	6.26	34.13	1.07	120	600	4.80	34.25	0.39	27.13	95	0.93
439	5.92	34.22	0.60	109							
523	5.25	34.23	0.49	101							
608	4.77	34.25	0.38	94							

SPENCER F. BAIRD; October 22, 1959; 1059, 1125 GCT; 36°03'N, 125°20'W; sounding, 2500 fm; wind, 300°, force 3; weather, fog; sea, moderate; wire angle, 13°, 22°. 63.90

2	16.01	33.28	5.56	349	0	(16.01)	(33.28)	(5.56)	(24.45)	(349)	(0.00)
11	15.07	33.13	5.74	341	10	15.20	33.14	5.72	24.52	342	0.03
31	14.98	33.44	5.53	316	20	14.74	33.28	5.57	24.72	323	0.07
41	13.78	33.32	5.59	300	30	14.97	33.44	5.53	24.80	316	0.10
55	12.16	33.42	4.95	263	50	13.03	33.40	5.43	25.16	281	0.16
69	11.26	33.54	3.96	239	75	10.89	33.59	3.66	25.72	228	0.22
93	10.03	33.66	3.41	209	100	9.89	33.67	3.43	25.95	206	0.28
112	9.21	33.66	3.56	196	125	8.99	33.75	3.23	26.16	186	0.33
131	8.96	33.77	3.10	184	150	9.01	33.87	2.41	26.25	177	0.37
150	9.01	33.87	2.41	177	200	8.12	34.01	2.21	26.50	154	0.46
178	8.70	34.03	1.87	161	250	7.11	34.01	2.65	26.65	140	0.53
211	7.84	34.00	2.38	151	300	6.37	34.03	2.45	26.76	129	0.60
239	7.28	34.00	2.65	143	400	5.59	34.08	1.30	26.90	116	0.73
285	6.56	34.04	2.54	131	500	5.26	34.21	0.57	27.04	103	0.84
337	5.95	34.01	2.19	125							
418	5.51	34.11	1.03	113							
500	5.26	34.21	0.57	103							
567	4.74	34.22	0.38	96							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
67.55	SPENCER F. BAIRD; October 19, 1959; 1250 GCT; 36°39.5'N, 122°25'W; sounding, 1050 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 21°.										
1	15.34	33.44	5.58	324	0	(15.34)	(33.44)	(5.58)	(24.71)	(324)	(0.00)
11	15.35	33.44	5.57	324	10	15.35	33.44	5.57	24.71	324	0.03
30	15.09	33.55	5.50	310	20	15.34	33.44	5.57	24.71	324	0.06
39	14.33	33.49	5.32	299	30	15.09	33.55	5.50	24.86	310	0.10
53	12.32	33.19	5.26	283	50	12.75	33.24	5.27	25.10	287	0.16
66	11.38	33.24	5.02	262	75	11.13	33.39	4.50	25.51	248	0.22
88	10.81	33.68	3.52	220	100	10.31	33.73	3.31	25.93	208	0.28
106	9.99	33.73	3.22	203	125	9.52	33.78	2.94	26.10	192	0.33
124	9.53	33.78	2.94	192	150	9.15	33.91	2.58	26.26	176	0.38
142	9.26	33.86	2.73	182	200	8.32	34.01	2.44	26.47	157	0.46
168	8.80	34.01	2.29	164	250	7.51	34.05	2.30	26.62	143	0.54
199	8.34	34.01	2.44	157	300	7.05	34.09	1.73	26.72	133	0.61
226	7.80	34.05	2.47	146	400	6.35	34.18	0.88	26.88	118	0.74
271	7.30	34.05	2.12	140	500	5.98	34.29	0.40	27.02	104	0.86
322	6.88	34.13	1.42	128							
401	6.34	34.18	0.87	118							
482	6.05	34.28	0.44	106							
565	5.64	34.31	0.34	100							
67.60	SPENCER F. BAIRD; October 19, 1959; 0955 GCT; 36°29'N, 122°47.5'W; sounding, 1600 fm; wind, 350°, force 3; weather, partly cloudy; sea, moderate; wire angle, 10°.										
2	15.94	33.34	5.64	344	0	(15.94)	(33.34)	(5.64)	(24.51)	(344)	(0.00)
11	15.94	33.35	5.62	342	10	15.94	33.35	5.62	24.52	342	0.03
31	16.28	33.69	5.47	326	20	15.94	33.38	5.58	24.54	340	0.07
41	15.60	33.68	5.23	311	30	16.28	33.68	5.47	24.69	326	0.10
56	12.00	33.62	4.03	245	50	12.78	33.62	4.25	25.39	259	0.16
70	10.92	33.68	3.72	222	75	10.80	33.70	3.67	25.82	218	0.22
95	9.94	33.76	3.33	200	100	9.75	33.78	3.24	26.06	196	0.27
115	9.38	33.85	2.91	184	125	9.29	33.89	2.73	26.23	180	0.32
134	9.18	33.93	2.58	176	150	8.96	33.97	2.56	26.34	169	0.36
154	8.90	33.98	2.54	168	200	8.52	34.09	1.98	26.50	154	0.45
184	8.66	34.06	2.08	158	250	7.90	34.17	1.57	26.66	139	0.52
218	8.34	34.12	1.86	149	300	7.16	34.15	1.38	26.75	130	0.59
247	7.96	34.17	1.58	140	400	6.68	34.20	0.85	26.86	120	0.72
297	7.19	34.15	1.41	130	500	6.00	34.24	0.48	26.98	109	0.84
351	6.92	34.19	1.07	124	600	5.31	34.34	0.37	27.13	94	0.95
434	6.46	34.21	0.66	117							
519	5.86	34.25	0.45	106							
603	5.28	34.34	0.36	93							
67.70	SPENCER F. BAIRD; October 19, 1959; 0515 GCT; 36°11'N, 123°31'W; sounding, 2000 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 07°.										
2	16.30	33.62	5.45	331	0	(16.30)	(33.62)	(5.45)	(24.64)	(331)	(0.00)
12	16.32	33.63	5.53	331	10	16.32	33.63	5.53	24.64	331	0.03
32	16.26	33.66	5.47	327	20	16.32	33.65	5.51	24.66	329	0.07
42	16.06	33.66	5.35	322	30	16.28	33.66	5.47	24.67	328	0.10
51	11.96	33.21	5.11	275	50	12.10	33.22	5.13	25.21	277	0.16
66	11.04	33.33	4.65	250	75	10.21	33.38	4.46	25.67	233	0.22
81	9.95	33.44	4.42	224	100	8.99	33.57	4.33	26.03	199	0.28
101	8.98	33.58	4.31	198	125	8.80	33.81	3.31	26.24	179	0.33
125	8.80	33.81	3.31	179	150	8.62	33.91	3.15	26.34	169	0.37
144	8.66	33.89	3.18	171	200	7.97	34.00	2.88	26.52	152	0.45
174	8.35	33.99	2.94	159	250	7.36	34.00	2.58	26.60	145	0.53
203	7.92	34.00	2.87	152	300	6.64	34.06	2.13	26.75	130	0.60
233	7.62	33.98	2.63	150	400	5.77	34.11	1.15	26.90	116	0.72
272	6.98	34.04	2.50	136	500	5.48	34.22	0.62	27.03	104	0.84
332	6.33	34.08	1.76	125							
406	5.74	34.11	1.13	115							
481	5.52	34.20	0.69	106							
561	5.29	34.31	0.43	96							

OBSERVED					INTERPOLATED				COMPUTED			SIO CCOFI 5910
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	

SPENCER F. BAIRD; October 19, 1959; 0020 GCT; 35°48'N, 124°16'W; sounding, 2200 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°. 67.80

2	15.48	32.95	5.41	362	0	(15.48)	(32.95)	(5.41)	(24.31)	(362)	(0.00)
11	15.44	32.98	5.44	359	10	15.44	32.98	5.43	24.34	360	0.04
31	13.77	33.19	5.87	310	20	15.40	32.99	5.46	24.36	358	0.07
41	13.20	33.22	5.74	296	30	13.82	33.18	5.87	24.84	312	0.11
51	12.52	33.17	5.50	288	50	12.58	33.18	5.52	25.08	288	0.17
66	11.34	33.08	5.34	274	75	10.84	33.15	5.24	25.39	260	0.23
81	10.58	33.21	5.14	251	100	9.71	33.41	4.57	25.79	222	0.30
100	9.71	33.41	4.57	222	125	9.06	33.67	3.80	26.09	193	0.35
125	9.06	33.67	3.80	193	150	8.72	33.77	3.46	26.23	180	0.40
145	8.77	33.75	3.52	182	200	8.01	33.96	2.77	26.48	156	0.48
175	8.43	33.91	3.17	166	250	7.35	34.02	2.47	26.62	143	0.56
205	7.92	33.97	2.70	154	300	6.83	34.05	2.01	26.72	134	0.63
234	7.50	34.00	2.52	146	400	6.14	34.16	0.93	26.90	116	0.76
274	7.12	34.04	2.28	138	500	5.74	34.22	0.68	26.99	108	0.88
334	6.43	34.07	1.57	127							
409	6.11	34.18	0.86	114							
483	5.86	34.22	0.69	109							
563	5.08	34.22	0.63	100							

SPENCER F. BAIRD; October 18, 1959; 1941 GCT; 35°28'N, 124°58'W; sounding, 2500 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°. 67.90

2	17.39	33.07	5.26	395	0	(17.39)	(33.07)	(5.26)	(23.96)	(395)	(0.00)
11	17.36	33.04	5.24	397	10	17.37	33.04	5.24	23.95	397	0.04
31	16.80	32.95	5.33	391	20	17.31	33.04	5.27	23.96	395	0.08
41	15.65	32.92	5.53	368	30	16.82	32.96	5.32	24.01	392	0.12
56	14.58	33.19	5.80	326	50	15.39	32.99	5.61	24.36	358	0.19
70	13.66	33.26	5.64	302	75	13.30	33.24	5.55	25.00	297	0.28
94	12.50	33.35	5.06	274	100	12.00	33.37	4.89	25.34	264	0.35
114	11.58	33.40	4.75	254	125	11.05	33.51	4.53	25.63	236	0.41
133	10.28	33.73	4.15	208	150	9.26	33.70	3.77	26.08	194	0.46
152	9.20	33.70	3.74	193	200	8.42	33.89	3.06	26.36	167	0.56
180	8.62	33.82	3.35	176	250	7.88	34.04	2.70	26.56	148	0.64
214	8.28	33.95	2.81	161	300	7.04	34.04	2.33	26.68	137	0.71
243	7.98	34.04	2.73	150	400	6.12	34.13	1.21	26.88	118	0.84
291	7.18	34.04	2.40	139	500	5.68	34.23	0.57	27.01	106	0.96
345	6.54	34.09	1.79	127	600	(5.04)	(34.27)	(0.34)	(27.11)	(96)	(1.07)
428	5.95	34.15	0.95	115							
512	5.62	34.24	0.52	104							
595	5.08	34.27	0.34	96							

SPENCER F. BAIRD; October 17, 1959; 2010 GCT; 36°08.5'N, 121°50'W; sounding, 350 fm; wind, direction missing, force 1; weather, fog; sea, slight; wire angle, 14°. 70.52

2	15.80	33.58	5.53	323	0	(15.80)	(33.58)	(5.53)	(24.72)	(323)	(0.00)
11	14.68	33.59	5.21	299	10	15.00	33.59	5.30	24.90	306	0.03
31	12.51	33.60	4.30	256	20	13.58	33.60	4.82	25.22	276	0.06
41	12.28	33.64	3.98	249	30	12.54	33.60	4.34	25.42	257	0.09
50	11.89	33.63	3.92	243	50	11.89	33.63	3.92	25.56	243	0.14
60	11.36	33.68	3.71	230	75	11.23	33.71	3.51	25.75	226	0.20
70	11.28	33.71	3.52	226	100	10.90	33.72	3.39	25.82	218	0.25
84	11.11	33.70	3.52	224	125	10.52	33.76	3.22	25.91	210	0.31
98	10.94	33.72	3.41	220	150	9.97	33.81	2.96	26.05	197	0.36
112	10.70	33.73	3.34	214	200	9.23	33.88	2.47	26.23	180	0.45
136	10.38	33.78	3.12	206	250	8.58	34.04	1.92	26.46	158	0.54
165	9.62	33.84	2.79	189	300	7.89	34.13	1.21	26.63	142	0.62
198	9.26	33.88	2.47	180	400	6.97	34.20	0.85	26.82	124	0.75
246	8.64	34.03	1.98	160	500	(6.28)	(34.24)	(0.50)	(26.95)	(112)	(0.88)
294	7.95	34.12	1.26	143							
396	7.00	34.20	0.87	124							
495	6.30	34.24	0.52	112							

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5910

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3} 10^{-5} cm/g	ΔD dyn. m

70.60 SPENCER F. BAIRD; October 18, 1959; 0016 GCT; 35°53.5'N, 122°22.5'W; sounding, 1750 fm; wind, 310°, force 2; weather, overcast; sea, slight; wire angle, 08°.

2	16.02	33.60	5.49	326	0	(16.02)	(33.60)	(5.49)	(24.69)	(236)	(0.00)
11	16.00	33.57	5.54	328	10	16.00	33.57	5.54	24.67	328	0.03
31	13.58	33.57	4.49	278	20	15.00	33.57	5.10	24.89	307	0.06
41	11.78	33.61	3.86	242	30	13.63	33.57	4.53	25.17	280	0.09
56	10.78	33.68	3.46	220	50	11.20	33.64	3.66	25.70	230	0.14
71	10.21	33.73	3.20	206	75	10.08	33.74	3.15	25.98	203	0.20
95	9.56	33.84	2.88	188	100	9.49	33.85	2.83	26.16	186	0.25
115	9.32	33.87	2.68	182	125	9.11	33.89	2.60	26.25	178	0.29
134	8.94	33.92	2.52	172	150	8.91	34.00	2.15	26.37	166	0.34
154	8.91	34.01	2.11	165	200	8.34	34.07	1.83	26.52	152	0.42
184	8.56	34.04	1.99	158	250	7.70	34.11	1.69	26.64	140	0.49
218	8.10	34.10	1.68	147	300	6.62	34.04	2.00	26.74	131	0.56
248	7.73	34.11	1.68	141	400	6.45	34.21	0.67	26.90	116	0.69
297	6.62	34.04	2.02	132	500	5.81	34.24	0.51	27.01	106	0.81
351	6.64	34.16	1.06	124	600	5.38	34.30	0.32	27.10	97	0.92
435	6.24	34.24	0.57	112							
520	5.69	34.25	0.50	104							
605	5.36	34.31	0.30	96							

70.70 SPENCER F. BAIRD; October 18, 1959; 0447, 0517 GCT; 35°33'N, 123°06'W; sounding, 2100 fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 09°, 10°.

2	16.14	33.43	5.44	341	0	(16.14)	(33.43)	(5.44)	(24.54)	(341)	(0.00)
11	16.13	33.44	5.52	340	10	16.13	33.44	5.51	24.54	340	0.03
31	15.08	33.46	5.35	317	20	16.10	33.44	5.52	24.55	339	0.07
41	12.09	33.39	4.65	264	30	15.80	33.45	5.46	24.63	332	0.10
56	11.56	33.63	3.72	236	50	11.99	33.58	4.11	25.52	248	0.16
71	10.70	33.68	3.27	218	75	10.52	33.71	3.17	25.88	213	0.22
96	9.94	33.82	2.77	196	100	9.85	33.83	2.73	26.09	194	0.27
115	9.60	33.90	2.54	184	125	9.43	33.95	2.38	26.25	178	0.32
135	9.29	33.99	2.21	173	150	9.18	34.03	2.07	26.35	168	0.36
155	9.13	34.04	2.01	166	200	8.76	34.10	1.60	26.48	156	0.44
184	8.87	34.07	1.71	160	250	8.48	34.16	1.47	26.56	148	0.52
219	8.64	34.14	1.52	152	300	7.80	34.20	1.18	26.70	135	0.59
249	8.49	34.16	1.47	148	400	6.90	34.22	0.76	26.84	122	0.72
298	7.82	34.20	1.19	136	500	6.13	34.30	0.45	27.01	106	0.84
354	7.34	34.22	0.93	127	600	5.52	34.36	0.35	27.13	94	0.95
438	6.57	34.23	0.62	116							
522	5.98	34.32	0.40	102							
608	5.48	34.36	0.33	94							

70.80 SPENCER F. BAIRD; October 18, 1959; 0940, 1003 GCT; 35°13.5'N, 123°48'W; sounding, 2250 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 18°, 24°.

1	16.84	33.68	5.20	339	0	(16.84)	(33.68)	(5.20)	(24.56)	(338)	(0.00)
11	16.83	33.68	5.38	339	10	16.83	33.68	5.36	24.56	338	0.03
30	16.80	33.68	5.36	338	20	16.82	33.68	5.37	24.56	338	0.07
59	11.48	33.48	4.33	246	30	16.80	33.68	5.36	24.57	338	0.10
68	10.88	33.61	3.98	226	50	13.30	33.51	4.67	25.20	278	0.16
82	10.56	33.70	3.43	214	75	10.78	33.65	3.79	25.78	222	0.23
96	9.96	33.78	3.24	199	100	9.87	33.79	3.18	26.06	196	0.28
110	9.71	33.83	3.03	191	125	9.45	33.86	2.83	26.18	185	0.33
134	9.22	33.89	2.68	179	150	8.94	34.00	2.30	26.37	166	0.37
153	8.88	34.02	2.28	164	200	8.09	34.05	2.47	26.54	151	0.45
182	8.34	34.05	2.38	154	250	7.39	34.10	1.90	26.68	137	0.53
210	7.93	34.05	2.49	148	300	7.01	34.11	1.62	26.74	131	0.60
239	7.48	34.09	1.99	139	400	6.39	34.22	0.81	26.90	116	0.72
287	7.10	34.11	1.71	132	500	5.84	34.27	0.55	27.02	104	0.84
340	6.74	34.13	1.24	126	600	(5.10)	(34.36)		(27.18)	(90)	(0.94)
413	6.30	34.23	0.75	114							
497	5.86	34.27	0.55	105							
581	5.28	34.34	0.31	93							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

70.90

SPENCER F. BAIRD; October 18, 1959; 1435 GCT; 34°53'N, 124°29.5'W; sounding, 2400 fm; wind, 330°, force 4; weather, overcast; sea, moderate; wire angle, 28°.

1	17.14	33.04	5.29	392	0	(17.14)	(33.04)	(5.29)	(24.00)	(392)	(0.00)
10	17.18	33.04	5.37	392	10	17.18	33.04	5.37	24.00	392	0.04
29	17.16	33.04	5.35	392	20	17.18	33.04	5.36	24.00	392	0.08
55	15.73	32.99	5.64	365	30	17.16	33.04	5.35	24.00	392	0.12
63	15.09	33.04	5.67	348	50	15.90	32.96	5.62	24.22	371	0.19
75	14.29	33.06a)	5.92	330	75	14.29	33.06	5.92	24.65	330	0.28
88	13.94	33.16a)	5.72	315	100	12.79	33.10	5.62	24.99	298	0.36
100	12.79	33.10	5.62	298	125	11.11	33.24	5.01	25.40	258	0.43
121	11.40	33.21	5.13	265	150	9.58	33.48	4.34	25.86	215	0.49
137	10.24	33.35	4.61	235	200	8.75	33.90	3.00	26.32	171	0.59
162	9.19	33.62	4.10	199	250	8.14	34.05	2.66	26.53	151	0.67
185	8.92	33.85	3.20	177	300	7.35	34.08	2.13	26.67	138	0.75
209	8.63	33.93	2.92	168	400	6.14	34.12	1.45	26.87	119	0.88
248	8.16	34.05	2.68	152	500	5.72	34.29	0.51	27.05	102	1.00
292	7.49	34.08	2.16	140							
364	6.21	34.05	1.89	126							
441	6.07	34.22	0.74	111							
522	5.56	34.29	0.47	100							

73.55

SPENCER F. BAIRD; October 17, 1959; 1344 GCT; 35°29'N, 121°37.5'W; sounding, 530 fm; wind, 360°, force 1; weather, fog; sea, slight; wire angle, 08°.

2	17.00	33.69	5.33	341	0	(17.00)	(33.69)	(5.33)	(24.53)	(341)	(0.00)
12	17.00	33.69	5.44	341	10	17.00	33.69	5.42	24.53	341	0.03
32	15.46	33.67	5.21	309	20	16.70	33.69	5.44	24.60	335	0.07
41	13.20	33.62	4.40	268	30	15.70	33.68	5.27	24.82	314	0.10
56	11.31	33.60	3.91	235	50	11.92	33.60	4.09	25.54	246	0.16
71	10.50	33.66	3.51	216	75	10.28	33.68	3.42	25.90	211	0.21
96	9.58	33.81	3.12	190	100	9.50	33.82	3.07	26.14	188	0.26
115	9.16	33.87	2.77	180	125	8.99	33.92	2.65	26.30	173	0.31
135	8.84	33.96	2.55	168	150	8.74	33.98	2.36	26.38	165	0.35
155	8.72	33.99	2.29	164	200	8.24	34.08	1.96	26.54	150	0.43
184	8.41	34.06	2.14	154	250	7.93	34.15	1.58	26.64	141	0.51
219	8.08	34.11	1.77	146	300	7.39	34.16	1.28	26.73	132	0.58
249	7.94	34.15	1.58	141	400	6.73	34.26	0.82	26.90	116	0.71
298	7.40	34.16	1.30	132	500	6.01	34.29	0.50	27.02	105	0.82
353	7.08	34.23	1.00	123	600	5.51	34.33	0.40	27.10	97	0.93
437	6.44	34.28	0.70	112							
521	5.90	34.30	0.44	103							
606	5.48	34.33	0.40	96							

73.60

SPENCER F. BAIRD; October 17, 1959; 1047 GCT; 35°20'N, 121°59.5'W; sounding, 1300 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 08°.

1	16.15	33.62	5.45	328	0	(16.15)	(33.62)	(5.45)	(24.67)	(328)	(0.00)
11	16.18	33.63	5.51	327	10	16.18	33.63	5.50	24.68	327	0.03
31	15.88	33.62	5.45	322	20	16.10	33.63	5.50	24.69	326	0.07
41	12.40	33.54	4.34	259	30	15.91	33.62	5.46	24.72	323	0.10
56	10.75	33.61	3.73	224	50	11.40	33.57	3.96	25.62	238	0.15
71	9.98	33.71	3.31	204	75	9.84	33.73	3.26	26.01	201	0.21
96	9.49	33.78	3.13	191	100	9.43	33.79	3.10	26.12	190	0.26
116	9.17	33.82	2.90	184	125	9.03	33.90	2.56	26.28	175	0.31
136	8.96	34.00	2.23	167	150	8.88	34.02	2.14	26.39	164	0.35
155	8.85	34.02	2.13	164	200	8.41	34.16	1.74	26.58	147	0.43
185	8.57	34.11	1.90	153	250	8.08	34.25	1.37	26.69	136	0.50
220	8.24	34.22	1.51	140	300	7.70	34.25	1.06	26.75	130	0.57
249	8.08	34.25	1.36	136	400	6.42	34.28	0.74	26.95	112	0.69
299	7.70	34.25	1.07	130	500	5.91	34.35	0.46	27.07	100	0.80
354	6.82	34.29	1.01	116	600	5.42	34.36	0.34	27.14	93	0.90
438	6.22	34.28	0.56	109							
522	5.80	34.37	0.41	97							
607	5.38	34.36	0.30	93							

a) Salinity samples at 75 and 88 meters appear to have been reversed; they are assumed to be in the order listed.

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5910

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

73.70 SPENCER F. BAIRD; October 17, 1959; 0605 GCT; 35°01'N, 122°41'W; sounding, 2200 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 22°.

2	16.14	33.62	5.56	327	0	(16.14)	(33.62)	(5.56)	(24.68)	(327)	(0.00)
11	16.13	33.61	5.50	328	10	16.13	33.61	5.51	24.67	328	0.03
34	13.20	33.65	4.45	265	20	16.10	33.61	5.48	24.68	327	0.07
43	11.78	33.68	3.58	237	30	15.53	33.62	5.26	24.81	315	0.10
57	11.08	33.71	3.31	223	50	11.28	33.71	3.36	25.74	226	0.15
70	10.60	33.81a)	3.19	215	75	10.49	33.73	3.15	25.90	211	0.21
92	10.22	33.71a)	3.07	201	100	10.09	33.84	2.94	26.06	196	0.26
110	9.91	33.85	2.84	193	125	9.63	33.85	2.71	26.13	189	0.31
127	9.58	33.85	2.69	188	150	9.20	33.94	2.36	26.28	175	0.35
154	9.13	33.96	2.29	173	200	8.66	34.10	1.87	26.49	155	0.44
180	8.87	34.04	2.08	163	250	8.24	34.13	1.56	26.58	147	0.51
214	8.52	34.12	1.75	152	300	7.63	34.18	1.24	26.70	135	0.59
241	8.34	34.13	1.61	148	400	6.78	34.24	0.66	26.88	118	0.72
284	7.80	34.15	1.38	139	500	5.94	34.27	0.44	27.01	106	0.83
341	7.28	34.25	0.90	125							
431	6.53	34.24	0.57	116							
516	5.82	34.29	0.42	103							

73.80 SPENCER F. BAIRD; October 17, 1959; 0117 GCT; 34°28.5'N, 123°21'W; sounding, 2250 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 23°.

3	16.48	33.62	5.46	335	0	(16.49)	(33.62)	(5.46)	(24.60)	(335)	(0.00)
12	16.46	33.65	5.49	333	10	16.46	33.65	5.48	24.62	333	0.03
36	15.52	33.62	5.07	314	20	16.28	33.66	5.40	24.67	328	0.07
46	12.49	33.57	4.36	258	30	16.21	33.66	5.34	24.69	326	0.10
60	10.76	33.62	3.76	224	50	11.80	33.58	4.15	25.54	245	0.16
74	10.33	33.72	3.39	209	75	10.32	33.73	3.37	25.92	209	0.21
97	9.69	33.86	2.93	189	100	9.53	33.86	2.83	26.17	186	0.26
116	9.24	33.87	2.70	181	125	8.92	33.87	2.74	26.26	177	0.31
134	8.76	33.91	2.80	171	150	8.61	33.99	2.79	26.41	163	0.35
162	8.48	34.02	2.75	159	200	7.88	34.05	2.63	26.56	148	0.43
190	8.06	34.05	2.58	150	250	7.24	34.08	2.14	26.68	137	0.50
227	7.46	34.04	2.70	143	300	7.00	34.17	1.26	26.79	126	0.57
255	7.22	34.09	2.06	136	400	6.14	34.24	0.83	26.96	110	0.69
301	7.00	34.18	1.25	126	500	5.82	34.30	0.43	27.05	102	0.80
361	6.36	34.22	1.06	115	600	5.41	34.41	0.33	27.18	90	0.90
455	5.94	34.26	0.54	107							
541	5.69	34.26	0.36	96							
615	5.34	34.41	0.33	88							

73.90 SPENCER F. BAIRD; October 16, 1959; 2030 GCT; 34°17'N, 124°02'W; sounding, 2000 fm; wind, 330°, force 5; weather, partly cloudy; sea, rough; wire angle, 25°.

2	16.98	33.69	5.39	341	0	(16.98)	(33.69)	(5.39)	(24.54)	(341)	(0.00)
12	16.98	33.71	5.39	339	10	16.98	33.70	5.39	24.55	340	0.03
31	16.64	33.68	5.44	334	20	16.89	33.70	5.40	24.57	338	0.07
58	13.26	33.40	4.87b)	285	30	16.65	33.68	5.43	24.60	334	0.10
67	10.80	33.08	5.07	264	50	16.60	33.67	5.44	24.61	334	0.17
81	11.08	33.43	4.36	243	75	10.52	33.09	4.96	25.40	259	0.24
94	10.52	33.59	3.97	222	100	10.21	33.58	3.92	25.83	218	0.30
108	9.58	33.55	3.89c)	210	125	9.10	33.66	3.76	26.08	194	0.36
129	9.04	33.71	3.72	190	150	8.72	33.88	2.88	26.31	172	0.40
147	8.76	33.86	2.98	174	200	8.10	34.02	3.01	26.51	153	0.48
174	8.57	33.97	2.73	164	250	7.68	34.09	1.95	26.62	143	0.56
200	8.10	34.02	3.01	153	300	7.02	34.11	1.57	26.74	131	0.63
227	7.90	34.07	2.16	146	400	6.00	34.11	1.12	26.88	118	0.76
272	7.40	34.09	1.79	138	500	5.28	34.21	0.68	27.04	103	0.88
323	6.73	34.14	1.43	126							
401	6.00	34.11	1.12	118							
482	5.40	34.20	0.74	105							
566	4.93	34.22	0.55	98							

a) Salinity samples at 70 and 92 meters appear to have been reversed; they are assumed to be in the order listed.

b) Alternate value, 4.49 ml/L, not used in interpolation.

c) Alternate value, 4.01 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{3} 10^{-5} cm/g	ΔD dyn. m	

SPENCER F. BAIRD; October 15, 1959; 2233 GCT; 34°54'N, 121°12.5'W; sounding, 310 fm; wind, 380°, force 5; weather, clear; sea, rough; wire angle, 26°. 77.55

2	17.18	33.68	5.37	346	0	(17.18)	(33.68)	(5.37)	(24.48)	(346)	(0.00)
11	17.19	33.69	5.42	346	10	17.19	33.69	5.40	24.48	346	0.03
29	16.86	33.69	5.40	338	20	17.09	33.69	5.42	24.52	343	0.07
38	16.36	33.67	5.29	329	30	16.85	33.69	5.40	24.57	338	0.10
47	15.07	33.62	5.00	305	50	14.71	33.61	4.84	24.98	298	0.17
56	14.02	33.60	4.60	285	75	11.49	33.70	3.81	25.70	230	0.23
65	12.13	33.54	4.39	254	100	9.80	33.83	3.05	26.10	192	0.29
78	10.99	33.71	3.59	221	125	9.27	33.96	2.60	26.28	175	0.33
91	9.97	33.78	3.18	199	150	9.07	34.02	2.31	26.36	167	0.38
104	9.72	33.85	3.01	190	200	8.62	34.12	1.89	26.51	153	0.46
126	9.26	33.96	2.59	175	250	8.10	34.16	1.62	26.62	143	0.53
151	9.06	34.02	2.30	167	300	7.54	34.19	1.30	26.72	133	0.60
182	8.80	34.09	2.02	158	400	6.70	34.25	0.78	26.89	117	0.73
227	8.35	34.14	1.76	148	500	(6.09)	(34.28)		(27.00)	(107)	(0.85)
272	7.84	34.16	1.48	139							
370	6.90	34.24	0.91	120							
466	6.29	34.27	0.56	110							

SPENCER F. BAIRD; October 16, 1959; 0118 GCT; 34°43'N, 121°33'W; sounding, 500 fm; wind, 310°, force 5; weather, cloudy; sea, rough; wire angle, 30°. 77.60

1	16.84	33.68	5.41	338	0	(16.84)	(33.68)	(5.41)	(24.56)	(338)	(0.00)
9	16.84	33.71	5.45	336	10	16.84	33.71	5.45	24.59	336	0.03
27	16.10	33.67	5.41	323	20	16.79	33.74	5.43	24.62	333	0.07
35	14.78	33.66	5.06	296	30	14.86	33.66	5.08	24.99	298	0.10
49	12.30	33.62	4.09	251	50	12.27	33.62	4.08	25.49	250	0.15
62	11.76	33.68	3.84	236	75	11.27	33.70	3.66	25.73	227	0.21
83	10.96	33.72	3.50	220	100	10.31	33.78	3.23	25.97	205	0.27
101	10.28	33.78	3.22	204	125	9.82	33.83	3.08	26.08	194	0.32
119	9.92	33.82	3.12	195	150	9.46	33.87	2.86	26.17	185	0.37
135	9.67	33.84	2.99	190	200	8.86	34.07	2.10	26.44	160	0.45
161	9.32	33.89	2.73	181	250	8.27	34.14	1.84	26.58	146	0.53
192	8.94	34.04	2.24	164	300	7.58	34.16	1.50	26.69	136	0.60
218	8.68	34.11	1.92	155	400	6.95	34.23	0.94	26.84	122	0.74
261	8.12	34.14	1.81	144	500	6.31	34.25	0.60	26.95	112	0.86
310	7.46	34.16	1.44	134							
385	6.99	34.22	0.97	123							
464	6.62	34.22	0.76	118							
546	5.90	34.32	0.47	102							

SPENCER F. BAIRD; October 16, 1959; 0620 GCT; 34°23'N, 122°16'W; sounding, 2300 fm; wind, 310°, force 5; weather, cloudy; sea, rough; wire angle, 10°. 77.70

2	17.46	33.71	5.28	350	0	(17.46)	(33.71)	(5.28)	(24.44)	(350)	(0.00)
12	17.48	33.73	5.33	349	10	17.48	33.73	5.32	24.45	349	0.04
36	17.47	33.73	5.30	349	20	17.49	33.73	5.30	24.45	349	0.07
46	16.92	33.71	5.14	338	30	17.49	33.73	5.30	24.45	349	0.10
61	11.56	33.70	4.18	232	50	15.55	33.71	4.96	24.88	308	0.17
75	10.28	33.65	3.77	214	75	10.28	33.65	3.77	25.87	214	0.24
100	9.61	33.77	3.23	194	100	9.61	33.77	3.23	26.08	194	0.29
119	9.09	33.89	2.67	177	125	8.93	33.91	2.61	26.29	174	0.33
139	8.64	33.96	2.43	166	150	8.58	34.00	2.32	26.42	162	0.38
168	8.44	34.04	2.21	157	200	7.74	34.00	3.22	26.55	149	0.46
197	7.80	34.00	3.23	150	250	6.96	34.04	2.28	26.69	136	0.53
236	7.14	34.04	2.42	138	300	6.46	34.05	1.92	26.76	129	0.60
266	6.78	34.04	2.22	134	400	6.05	34.22	0.78	26.96	111	0.72
315	6.38	34.06	1.76	127	500	5.46	34.26	0.51	27.06	101	0.83
379	6.23	34.21	0.84	114	600	5.14	34.34	0.30	27.16	92	0.93
478	5.48	34.23	0.59	104							
567	5.27	34.33	0.32	94							
642	4.98	34.34	0.30	90							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

77.80 SPENCER F. BAIRD; October 16, 1959; 1100 GCT; 34°04'N, 122°59'W; sounding, 2200 fm; wind, 310°, force 4; weather, clear; sea, rough; wire angle, 15°.

2	16.61	33.53	5.46	344	0	(16.61)	(33.53)	(5.46)	(24.50)	(344)	(0.00)
12	16.64	33.53	5.42	345	10	16.62	33.53	5.43	24.49	345	0.03
31	15.40	33.30	5.54	335	20	16.64	33.54	5.42	24.49	345	0.07
40	14.28	33.21	5.61	319	30	15.60	33.34	5.53	24.59	336	0.10
54	11.96	32.97	5.59	292	50	12.50	33.01	5.61	24.98	299	0.17
69	12.06	33.29	4.89	271	75	11.64	33.32	4.79	25.37	262	0.24
92	10.12	33.44	4.43	227	100	9.97	33.48	4.34	25.80	221	0.30
111	9.70	33.56	4.08	211	125	9.18	33.69	3.40	26.09	193	0.35
130	9.04	33.78	3.12	185	150	8.73	33.88	2.91	26.30	172	0.40
148	8.75	33.87	2.93	174	200	8.21	34.03	2.35	26.49	155	0.48
176	8.50	33.98	2.62	162	250	7.27	34.00	2.43	26.61	144	0.56
208	8.11	34.03	2.29	152	300	6.75	34.07	1.80	26.74	131	0.63
237	7.54	34.00	2.48	146	400	6.18	34.17	0.79	26.90	116	0.76
283	6.78	34.03	2.10	134	500	5.73	34.32	0.37	27.07	100	0.87
336	6.74	34.14	1.21	126							
418	6.04	34.18	0.71	114							
499	5.74	34.32	0.38	100							
584	5.43	34.40	0.32	90							

77.90 SPENCER F. BAIRD; October 16, 1959; 1521, 1550 GCT; 33°44'N, 123°38'W; sounding, 2250 fm; wind, 330°, force 4; weather, clear; sea, very rough; wire angle, 11°, 17°.

2	17.30	33.11	5.29	390	0	(17.30)	(33.11)	(5.29)	(24.02)	(390)	(0.00)
12	17.34	33.12	5.38	390	10	17.32	33.12	5.37	24.02	390	0.04
31	17.12	33.16	5.37	383	20	17.35	33.12	5.38	24.02	390	0.08
41	16.31	33.13	5.58	367	30	17.20	33.16	5.38	24.08	384	0.12
55	16.25	33.35	5.56	350	50	16.34	33.21	5.57	24.31	362	0.19
70	13.76	33.15	5.75	313	75	13.66	33.15	5.72	24.86	310	0.28
94	12.43	33.27	5.29	279	100	12.18	33.35	5.07	25.29	269	0.35
113	11.34	33.51	4.61	242	125	10.52	33.59	3.97	25.79	222	0.41
131	10.40	33.61	3.90	218	150	10.01	33.70	4.07	25.96	206	0.46
151	9.98	33.70	4.07	205	200	8.72	33.96	3.12	26.36	167	0.56
179	8.97	33.82	3.48	180	250	8.14	34.07	2.10	26.54	150	0.64
212	8.59	34.01	2.96	161	300	7.46	34.16	1.55	26.71	134	0.72
241	8.26	34.05	2.23	153	400	6.48	34.23	0.85	26.91	115	0.84
289	7.60	34.14	1.65	137	500	5.81	34.27	0.53	27.03	104	0.96
342	6.94	34.17	1.25	126	600	(5.48)	(34.35)		(27.13)	(94)	(1.07)
424	6.28	34.25	0.72	112							
502	5.80	34.27	0.52	104							
587	5.50	34.34	0.35	96							

80.52 SPENCER F. BAIRD; October 15, 1959; 1554 GCT; 34°25'N, 120°35'W; sounding, 100 fm; wind, 330°, force 4; weather, clear; sea, rough; wire angle, 07°.

3	18.49	33.73	5.20	373	0	(18.49)	(33.73)	(5.20)	(24.20)	(373)	(0.00)
13	18.48	33.72	5.21	374	10	18.49	33.72	5.21	24.20	373	0.04
33	13.60	33.48	4.97	286	20	17.75	33.61	5.20	24.29	364	0.07
53	12.00	33.52	4.38	253	30	14.50	33.50	5.04	24.95	302	0.11
77	11.15	33.66	3.81	227	50	12.20	33.51	4.50	25.42	257	0.16
102	10.11	33.73	3.58	205	75	11.16	33.65	3.82	25.72	228	0.22
					100	10.11	33.73	3.58	25.96	206	0.28

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 15, 1959; 1309 GCT; 34°19'N, 120°48.5'W; sounding, 425 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 22°. 80.55

2	17.40	33.66	5.33	352	0	(17.40)	(33.66)	(5.33)	(24.42)	(352)	(0.00)
11	17.40	33.66	5.52	352	10	17.40	33.66	5.51	24.42	352	0.04
30	16.86	33.71	5.56	337	20	17.31	33.65	5.56	24.43	351	0.07
39	15.50	33.63	5.07	313	30	16.86	33.71	5.56	24.58	337	0.10
53	11.88	33.58	4.26	246	50	12.94	33.58	4.51	25.33	265	0.16
66	10.72	33.60	3.89	224	75	10.31	33.64	3.68	25.86	215	0.22
89	9.90	33.71	3.40	203	100	9.70	33.77	3.25	26.06	196	0.28
107	9.56	33.78	3.17	193	125	9.22	33.93	2.73	26.27	176	0.32
125	9.22	33.93	2.73	176	150	8.96	33.98	2.44	26.34	169	0.37
143	9.00	33.96	2.52	170	200	8.41	34.15	2.07	26.57	148	0.45
170	8.82	34.02	2.18	164	250	8.11	34.16	1.66	26.62	143	0.52
202	8.39	34.16	2.06	146	300	7.79	34.23	1.33	26.72	133	0.59
229	8.26	34.16	1.80	145	400	7.09	34.33	0.78	26.90	116	0.72
274	7.96	34.18	1.47	139	500	6.50	34.33	0.53	26.98	109	0.84
324	7.60	34.27	1.20	127							
403	7.08	34.33	0.77	116							
484	6.66	34.33	0.59	111							
566	5.70	34.33	0.42	98							

SPENCER F. BAIRD; October 15, 1959; 1015 GCT; 34°09'N, 121°09'W; sounding, 1250 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 20°. 80.60

2	17.57	33.75	5.24	350	0	(17.57)	(33.75)	(5.24)	(24.44)	(350)	(0.00)
12	17.57	33.72	5.33	352	10	17.57	33.74	5.32	24.42	352	0.04
31	16.68	33.71	5.21	333	20	17.52	33.72	5.33	24.43	351	0.07
40	13.92	33.56	4.94	286	30	16.85	33.71	5.22	24.59	336	0.10
54	11.22	33.55	4.16	237	50	11.95	33.54	4.41	25.49	250	0.16
68	10.22	33.69	3.54	210	75	9.91	33.73	3.35	26.00	202	0.22
91	9.40	33.81	3.02	188	100	9.26	33.85	2.92	26.20	183	0.27
110	9.17	33.90	2.79	178	125	9.04	33.95	2.53	26.31	172	0.31
128	9.04	33.96	2.51	171	150	8.91	34.06	2.27	26.42	162	0.36
147	8.94	34.05	2.32	163	200	8.54	34.12	1.68	26.52	152	0.44
175	8.72	34.08	1.94	157	250	8.03	34.18	1.40	26.65	140	0.51
208	8.47	34.13	1.62	150	300	7.64	34.20	1.14	26.71	134	0.58
236	8.21	34.18	1.47	143	400	6.84	34.27	0.68	26.88	118	0.71
284	7.72	34.18	1.30	136	500	6.17	34.33	0.40	27.03	104	0.83
336	7.48	34.22	0.92	130	600	(5.31)	(34.33)		(27.14)	(94)	(0.93)
418	6.70	34.29	0.60	114							
501	6.16	34.33	0.39	104							
586	5.44	34.34	0.36	95							

SPENCER F. BAIRD; October 15, 1959; 0504 GCT; 33°47.5'N, 121°53'W; sounding, 2050 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 10°. 80.70

2	17.24	33.60	5.31	354	0	(17.24)	(33.60)	(5.31)	(24.40)	(354)	(0.00)
12	17.26	33.61	5.37	353	10	17.25	33.61	5.36	24.41	353	0.04
32	17.06	33.61	5.36	348	20	17.21	33.61	5.37	24.42	352	0.07
41	16.75	33.58	5.37	344	30	17.10	33.62	5.36	24.45	349	0.11
56	11.27	33.40	4.44	249	50	13.10	33.40	4.78	25.15	282	0.17
71	10.32	33.51	4.18	224	75	10.12	33.54	4.10	25.82	219	0.23
95	9.36	33.69	3.48	196	100	9.31	33.73	3.30	26.10	192	0.28
114	9.16	33.85	2.66	181	125	8.92	33.89	2.68	26.28	175	0.33
134	8.70	33.92	2.78	169	150	8.31	33.95	3.11	26.43	161	0.37
153	8.26	33.96	3.12	160	200	7.70	34.05	2.67	26.59	145	0.45
182	7.92	34.04	2.73	149	250	7.04	34.08	2.34	26.71	134	0.52
216	7.47	34.04	2.62	143	300	6.75	34.10	1.60	26.76	129	0.59
245	7.08	34.07	2.40	135	400	5.93	34.23	0.83	26.98	109	0.71
293	6.80	34.09	1.66	130	500	5.42	34.26	0.42	27.07	100	0.82
347	6.41	34.17	1.07	119	600	(5.12)	(34.36)	(0.27)	(27.18)	(90)	(0.92)
431	5.69	34.26	0.66	104							
514	5.38	34.26	0.40	100							
599	5.12	34.36	0.27	90							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

80.80 SPENCER F. BAIRD; October 15, 1959; 0025 GCT; 33°28'N, 122°32'W; sounding, 2300 fm; wind, 330°, force 2; weather, fog; sea, moderate; wire angle, 17°.

3	16.42	33.20	5.58	365	0	(16.43)	(33.20)	(5.58)	(24.28)	(365)	(0.00)
12	16.33	33.21	5.64	362	10	16.36	33.21	5.62	24.30	363	0.04
32	14.87	33.13	5.80	336	20	15.91	33.22	5.74	24.42	352	0.07
41	13.84	33.11	5.81	317	30	15.05	33.16	5.80	24.56	338	0.11
55	12.01	32.97	5.63	294	50	14.05	33.23	5.80	24.83	313	0.17
65	11.64	33.11	5.30	277	75	11.41	33.24	5.11	25.35	263	0.24
79	11.32	33.30	5.02	257	100	9.72	33.47	4.31	25.83	218	0.30
97	9.78	33.43	4.41	222	125	9.30	33.67	3.67	26.05	197	0.36
120	9.40	33.64	3.74	200	150	8.83	33.81	3.27	26.24	179	0.41
138	9.02	33.73	3.50	188	200	8.24	34.01	2.73	26.47	157	0.49
166	8.63	33.91	2.95	169	250	7.78	34.10	1.88	26.63	142	0.57
193	8.36	33.99	2.76	159	300	7.12	34.11	1.63	26.73	132	0.64
220	7.89	34.04	2.67	149	400	5.71	34.09	1.32	26.89	117	0.77
257	7.74	34.11	1.79	141	500	5.38	34.24	0.50	27.05	102	0.88
312	6.94	34.11	1.61	130							
383	5.78	34.06	1.45	120							
454	5.62	34.20	0.71	108							
532	5.24	34.27	0.43	98							

80.90 SPENCER F. BAIRD; October 14, 1959; 1941 GCT; 33°09'N, 123°13'W; sounding, 2300 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 06°.

2	17.42	33.08	5.28	395	0	(17.42)	(33.08)	(5.28)	(23.97)	(395)	(0.00)
12	17.38	33.06	5.33	396	10	17.39	33.06	5.32	23.96	396	0.04
32	17.32	33.13	5.30	389	20	17.37	33.07	5.33	23.98	394	0.08
42	16.13	33.11	5.56	364	30	17.33	33.13	5.30	24.02	390	0.12
52	16.34	33.31	5.49	355	50	16.29	33.23	5.52	24.34	359	0.19
67	14.02	33.17	5.61	316	75	13.60	33.24	5.44	24.94	303	0.28
82	13.48	33.29	5.36	297	100	12.68	33.35	5.17	25.21	277	0.35
102	12.56	33.36	5.15	274	125	11.38	33.44	4.75	25.51	248	0.42
126	11.36	33.44	4.74	247	150	10.22	33.57	4.07	25.82	219	0.48
146	10.34	33.54	4.14	223	200	9.16	33.93	2.68	26.28	175	0.58
175	9.66	33.78	3.41	194	250	8.15	34.02	2.46	26.51	153	0.66
205	9.04	33.95	2.60	172	300	7.54	34.11	1.99	26.66	138	0.74
235	8.40	34.00	2.51	159	400	6.49	34.19	1.01	26.87	119	0.87
275	7.78	34.07	2.34	145	500	6.11	34.29	0.56	27.00	107	0.99
334	7.20	34.13	1.44	132							
408	6.44	34.20	0.97	118							
483	6.22	34.28	0.61	109							
562	5.66	34.30	0.49	100							

82.47 SPENCER F. BAIRD; October 13, 1959; 1632 GCT; 34°15'N, 119°58'W; sounding, 310 fm; wind, 120°, force 2; weather, fog; sea, slight; wire angle, 01°.

2	19.20	33.73	5.10	390	0	(19.20)	(33.73)	(5.10)	(24.02)	(390)	(0.00)
12	18.56	33.73	5.27	374	10	19.05	33.72	5.15	24.05	387	0.04
32	16.08	33.58	5.09	329	20	17.60	33.69	5.25	24.39	355	0.08
42	14.54	-	5.41		30	16.30	33.60	5.11	24.63	332	0.11
52	12.62	33.58	4.25	260	50	12.93	33.58	4.36	25.32	266	0.17
62	11.94	33.59	3.80	246	75	11.71	33.62	3.69	25.59	240	0.23
72	11.78	33.61	3.69	242	100	10.90	33.70	3.27	25.80	221	0.29
87	11.42	33.66	3.51	232	125	10.30	33.80	2.93	25.98	203	0.35
102	10.84	33.70	3.26	219	150	9.79	33.91	2.58	26.16	186	0.40
117	10.58	33.76	3.13	210	200	9.20	34.02	2.08	26.34	169	0.49
142	9.88	33.90	2.60	189	250	8.86	34.16	1.40	26.50	154	0.57
172	9.54	33.91	2.52	182	300	8.28	34.21	0.96	26.64	141	0.64
207	9.14	34.04	1.97	166	400	7.37	34.25	0.59	26.79	126	0.78
257	8.80	34.17	1.33	152	500	6.58	34.28	0.13	26.94	113	0.91
307	8.20	34.22	0.92	140							
412	7.26	34.25	0.53	124							
512	6.50	34.29	0.10	111							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10 cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 12, 1959; 1027 GCT; 34°14'N, 119°22'W; sounding, 12 fm; wind, 270°, force 1; weather, overcast; sea, slight; wire angle, 00°. 83.40

1	19.90	33.75	5.20	405	0	(19.90)	(33.75)	(5.20)	(23.86)	(405)	(0.00)
11	19.38	33.75	5.36	392	10	19.43	33.75	5.35	23.98	394	0.04

SPENCER F. BAIRD; October 12, 1959; 1153 GCT; 34°07.5'N, 119°35'W; sounding, 135 fm; wind, 270°, force 1; weather, overcast; sea, slight; wire angle, 10°. 83.43

1	19.80	33.82	5.23	398	0	(19.80)	(33.82)	(5.23)	(23.93)	(398)	(0.00)
11	18.84	33.72	5.31	382	10	18.92	33.72	5.30	24.10	383	0.04
30	16.92	33.70	5.28	338	20	18.09	33.71	5.31	24.29	364	0.08
50	14.18	33.53	4.71	294	30	16.92	33.70	5.28	24.56	338	0.11
75	12.61	33.58	4.14	260	50	14.18	33.53	4.71	25.04	294	0.17
100	10.92	33.71	3.35	220	75	12.61	33.58	4.14	25.39	260	0.24
125	10.20	33.85	2.91	198	100	10.92	33.71	3.35	25.81	220	0.30
155	9.58	33.96	2.50	180	125	10.20	33.85	2.91	26.04	198	0.36
					150	9.65	33.94	2.58	26.20	183	0.41

SPENCER F. BAIRD; October 13, 1959; 2002 GCT; 33°52'N, 120°07.5'W; sounding, 62 fm; wind, 190°, force 2; weather, clear; sea, rough; wire angle, 02°. 83.51

2	19.46	33.79	5.22	392	0	(19.46)	(33.79)	(5.22)	(24.00)	(392)	(0.00)
12	19.07	33.71	5.33	388	10	19.10	33.71	5.32	24.04	388	0.04
32	14.56	33.57	5.28	298	20	17.20	33.61	5.33	24.42	352	0.08
52	12.54	33.57	4.33	259	30	14.95	33.58	5.33	24.91	305	0.11
77	11.52	33.65	3.85	234	50	12.63	33.56	4.39	25.37	261	0.17
					75	11.58	33.64	3.88	25.64	236	0.23

SPENCER F. BAIRD; October 13, 1959; 2209 GCT; 33°44'N, 120°24.5'W; sounding, 515 fm; wind, 190°, force 1; weather, clear; sea, moderate; wire angle, 04°. 83.55

1	18.29	33.66	5.20	373	0	(18.29)	(33.66)	(5.20)	(24.20)	(373)	(0.00)
11	17.31	33.64	5.49	352	10	17.33	33.64	5.49	24.42	352	0.04
31	13.34	33.54	4.88	276	20	17.12	33.64	5.49	24.46	348	0.07
41	11.83	33.44	4.62	256	30	13.38	33.54	4.89	25.22	276	0.10
51	11.30	33.54	4.28	239	50	11.32	33.53	4.30	25.59	240	0.15
66	11.02	33.61	3.94	229	75	10.73	33.64	3.86	25.79	222	0.21
81	10.58	33.67	3.81	217	100	10.02	33.72	3.71	25.97	204	0.27
101	10.00	33.72	3.69	204	125	9.27	33.84	3.18	26.18	184	0.32
126	9.26	33.84	3.17	184	150	9.09	33.92	2.80	26.28	175	0.36
146	9.14	33.91	2.84	176	200	8.70	34.13	2.04	26.50	154	0.44
175	8.86	34.05	2.21	162	250	8.43	34.15	1.67	26.56	148	0.52
205	8.68	34.14	1.99	152	300	7.99	34.22	1.33	26.69	136	0.59
235	8.56	34.14	1.78	151	400	7.01	34.30	0.70	26.89	117	0.72
275	8.19	34.18	1.48	142	500	6.41	34.34	0.55	27.00	107	0.84
335	7.68	34.28	1.03	128							
411	6.94	34.31	0.67	116							
484	6.54	34.34	0.57	108							
564	5.84	34.31	0.37	102							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

83.60 SPENCER F. BAIRD; October 14, 1959; 0051 GCT; 33°34'N, 120°44.5'W; sounding, 800 fm; wind, 190°, force 2; weather, overcast; sea, moderate; wire angle, 12°.

2	18.38	33.71	5.39	372	0	(18.38)	(33.71)	(5.39)	(24.21)	(372)	(0.00)
12	17.48	33.68	5.41	361	10	17.98	33.69	5.41	24.30	363	0.04
31	14.82	33.51	5.22	308	20	16.65	33.61	5.37	24.56	339	0.07
41	12.34	33.62	3.90	252	30	14.90	33.51	5.23	24.87	309	0.10
51	11.74	33.69	3.55	235	50	11.79	33.69	3.56	25.64	236	0.16
65	10.89	33.68	3.50	221	75	10.39	33.68	3.50	25.88	213	0.22
80	10.07	33.68	3.47	208	100	9.28	33.80	3.14	26.16	187	0.27
99	9.31	33.80	3.15	187	125	8.88	33.92	2.78	26.31	172	0.31
123	8.90	33.91	2.81	172	150	8.59	33.96	2.53	26.39	164	0.35
142	8.68	33.95	2.61	166	200	8.06	34.09	1.98	26.58	147	0.43
171	8.39	34.00	2.39	158	250	7.69	34.16	1.48	26.68	137	0.51
200	8.06	34.09	1.98	147	300	7.38	34.24	1.10	26.79	127	0.57
230	7.88	34.13	1.67	142	400	6.76	34.28	0.69	26.90	116	0.70
268	7.53	34.19	1.31	132	500	6.33	34.32	0.46	27.00	107	0.81
328	7.26	34.26	0.99	124							
401	6.75	34.28	0.68	116							
474	6.46	34.31	0.51	110							
553	6.08	34.34	0.41	102							

83.70 SPENCER F. BAIRD; October 14, 1959; 0527, 0558 GCT; 33°14.5'N, 121°26'W; sounding, 2050 fm; wind, direction missing, force 1; weather, overcast; sea, slight; wire angle, 09°, 18°.

2	17.23	33.42	5.40	366	0	(17.23)	(33.42)	(5.40)	(24.27)	(366)	(0.00)
12	17.00	33.42	5.39	361	10	17.03	33.42	5.39	24.31	362	0.04
32	16.87	33.46	5.37	356	20	16.92	33.43	5.38	24.35	358	0.07
41	15.29	33.30	5.62	333	30	16.88	33.46	5.37	24.38	356	0.11
51	12.46	33.09	5.52	293	50	12.63	33.09	5.54	25.01	296	0.17
66	11.12	33.10	5.01	268	75	10.70	33.23	4.71	25.47	252	0.24
80	10.50	33.30	4.50	243	100	9.72	33.66	3.44	25.97	204	0.30
100	9.72	33.66	3.44	204	125	9.08	33.78	3.45	26.18	185	0.35
125	9.08	33.78	3.45	185	150	8.66	33.89	3.25	26.32	171	0.40
144	8.72	33.86	3.33	174	200	8.08	34.02	2.94	26.52	152	0.48
174	8.45	33.97	2.62	162	250	7.10	34.07	2.74	26.69	136	0.55
203	8.00	34.02	2.96	151	300	6.80	34.15	1.50	26.80	126	0.62
233	7.36	34.03	2.93	142	400	6.31	34.21	0.66	26.91	115	0.74
272	6.88	34.14	2.10	127	500	5.82	34.32	0.37	27.06	101	0.86
333	6.73	34.15	1.12	125							
394	6.33	34.20	0.71	116							
467	6.03	34.30	0.43	105							
548	5.56	34.34	0.32	96							

83.80 SPENCER F. BAIRD; October 14, 1959; 1024 GCT; 32°54'N, 122°07'W; sounding, 2200 fm; wind, 120°, force 2; weather, overcast; sea, slight; wire angle, 01°.

2	17.31	33.67	5.29	350	0	(17.31)	(33.67)	(5.29)	(24.44)	(350)	(0.00)
12	17.30	33.64	5.36	352	10	17.30	33.65	5.36	24.43	351	0.04
32	17.24	33.65	5.33	350	20	17.29	33.64	5.37	24.43	351	0.07
42	15.53	33.49	5.45	324	30	17.25	33.65	5.35	24.44	350	0.11
52	14.46	33.39	5.34	309	50	14.74	33.43	5.36	24.84	312	0.17
67	11.39	33.04	5.22	277	75	11.09	33.11	5.10	25.31	267	0.24
82	10.84	33.16	5.00	259	100	9.78	33.46	4.31	25.81	220	0.31
102	9.68	33.48	4.23	216	125	9.26	33.68	3.53	26.07	195	0.36
127	9.24	33.69	3.48	194	150	9.09	33.89	2.72	26.26	177	0.41
147	9.14	33.87	2.69	180	200	8.01	34.02	3.03	26.52	152	0.49
177	8.40	33.96	3.18	162	250	7.30	34.04	2.59	26.65	140	0.56
206	7.92	34.02	2.98	150	300	6.80	34.09	2.10	26.75	130	0.63
236	7.52	34.05	2.68	143	400	5.95	34.16	0.96	26.92	114	0.76
276	6.92	34.04	2.45	135	500	5.52	34.29	0.40	27.08	99	0.87
336	6.65	34.18	1.36	122							
411	5.86	34.17	0.88	112							
486	5.56	34.27	0.46	101							
566	5.39	34.38	0.31	91							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 $^{-5}_{10}$ cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 $^{-5}_{10}$ cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 14, 1959; 1501 GCT; 32°34'N, 122°48'W; sounding, 2300 fm; wind, 330°, force 2; weather, overcast; sea, moderate; wire angle, 03°. 83.90

2	16.56	33.31	5.36	359	0	(16.56)	(33.31)	(5.36)	(24.34)	(359)	(0.00)
12	16.70	33.42	5.47	354	10	16.68	33.41	5.46	24.39	355	0.04
32	16.66	33.57	5.50	342	20	16.69	33.49	5.48	24.45	349	0.07
42	15.49	33.37	5.59	332	30	16.67	33.57	5.49	24.51	343	0.11
52	14.64	33.35	5.59	316	50	14.95	33.37	5.59	24.74	321	0.17
67	12.18	33.00	5.62	294	75	11.61	33.08	5.36	25.20	278	0.25
82	11.26	33.19	5.00	264	100	10.68	33.31	4.87	25.54	245	0.31
102	10.60	33.31	4.83	244	125	9.48	33.56	4.02	25.93	208	0.37
127	9.42	33.58	3.96	205	150	9.11	33.80	3.35	26.19	184	0.42
147	9.16	33.78	3.42	186	200	8.43	34.00	3.02	26.44	159	0.51
177	8.73	33.93	3.07	168	250	7.79	34.07	2.10	26.59	145	0.59
206	8.34	34.00	3.00	158	300	7.53	34.16	1.35	26.71	134	0.66
236	7.90	34.04	2.55	148	400	6.42	34.18	0.98	26.87	119	0.79
276	7.66	34.13	1.51	139	500	5.91	34.29	0.47	27.03	104	0.91
336	7.31	34.20	1.22	129							
410	6.32	34.18	0.92	118							
485	6.00	34.27	0.50	106							
565	5.46	34.32	0.41	97							

SPENCER F. BAIRD; October 12, 1959; 0601 GCT; 33°50'N, 118°37.5'W; sounding, 220 fm; wind, direction missing, force 1; weather, fog; sea, slight; wire angle, 00°. 87.35

2	19.94	33.74	5.33	407	0	(19.94)	(33.74)	(5.33)	(23.84)	(407)	(0.00)
12	19.91	33.78	5.40	404	10	19.91	33.77	5.38	23.87	404	0.04
32	15.88	33.56	5.45	326	20	19.00	33.75	5.42	24.09	384	0.08
52	14.15	33.55	4.76	291	30	16.35	33.58	5.45	24.60	335	0.12
77	12.82	33.58	4.15	263	50	14.30	33.55	4.82	25.03	294	0.18
102	11.63	33.64	3.88	237	75	12.90	33.57	4.18	25.33	265	0.25
127	11.00	33.74	3.57	219	100	11.71	33.63	3.90	25.60	239	0.31
167	10.16	33.84	2.93	198	125	11.06	33.74	3.61	25.80	220	0.37
207	9.68	33.95	2.61	182	150	10.45	33.80	3.18	25.95	206	0.43
					200	9.74	33.93	2.65	26.18	184	0.52

SPENCER F. BAIRD; October 12, 1959; 0315 GCT; 33°40'N, 118°58'W; sounding, 260 fm; wind, 240°, force 3; weather, fog; sea, moderate; wire angle, 05°. 87.40

2	18.80	33.75	5.15	379	0	(18.80)	(33.75)	(5.15)	(24.14)	(379)	(0.00)
12	18.42	33.75	5.32	370	10	18.67	33.76	5.24	24.18	375	0.04
32	16.80	33.65	5.42	340	20	17.60	33.70	5.40	24.40	354	0.07
52	13.14	33.40	5.14	283	30	17.03	33.66	5.41	24.50	344	0.11
77	11.64	33.47	4.57	250	50	13.35	33.40	5.17	25.10	287	0.17
101	10.22	33.74	3.66	206	75	11.68	33.47	4.59	25.48	251	0.24
126	9.85	33.87	3.02	191	100	10.35	33.73	3.75	25.91	210	0.30
166	9.36	33.95	2.57	177	125	9.86	33.87	3.03	26.11	191	0.35
205	8.50	34.03	2.16	158	150	9.57	33.92	2.73	26.20	182	0.40
255	8.20	34.14	1.59	146	200	8.58	34.01	2.24	26.43	161	0.48
305	8.00	34.22	1.36	137	250	8.21	34.13	1.64	26.58	147	0.56
410	7.12	34.27	0.65	121	300	8.03	34.21	1.40	26.67	138	0.64
					400	7.21	34.27	0.71	26.83	122	0.77

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

87.45 SPENCER F. BAIRD; October 12, 1959; 0029 GCT; 33°30.5'N, 119°18.5'W; sounding, 917 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 07°.

2	18.82	33.78	5.28	377	0	(18.82)	(33.78)	(5.28)	(24.16)	(377)	(0.00)
12	18.74	33.77	5.36	376	10	18.80	33.78	5.35	24.17	376	0.04
32	12.89	33.56	4.61	266	20	16.80	33.67	5.15	24.56	339	0.07
42	11.50	33.60	4.10	238	30	13.50	33.57	4.73	25.21	277	0.10
52	11.08	33.62	3.82	229	50	11.16	33.62	3.86	25.69	231	0.15
67	10.54	33.68	3.71	215	75	10.22	33.76	3.46	25.96	205	0.21
82	9.90	33.78	3.33	198	100	9.12	33.87	3.07	26.24	179	0.26
101	9.09	33.87	3.06	178	125	8.71	33.98	2.62	26.38	165	0.30
126	8.70	33.98	2.61	164	150	8.59	34.06	2.15	26.47	157	0.34
145	8.59	34.04	2.24	158	200	8.12	34.15	1.70	26.62	143	0.42
175	8.44	34.14	1.79	149	250	8.00	34.23	1.31	26.69	136	0.49
205	8.08	34.16	1.67	142	300	7.74	34.24	1.10	26.73	132	0.56
234	8.02	34.21	1.44	138	400	7.12	34.31	0.84	26.88	118	0.69
273	7.93	34.23	1.24	135	500	6.59	34.35	0.49	26.99	108	0.80
333	7.48	34.26	0.94	126							
407	7.09	34.31	0.81	117							
481	6.72	34.34	0.53	110							
562	6.10	34.37	0.43	100							

87.55 SPENCER F. BAIRD; October 11, 1959; 1927 GCT; 33°12'N, 120°02'W; sounding, 565 fm; wind, 280°, force 1; weather, partly cloudy; sea, moderate; wire angle, 02°.

2	18.79	33.75	5.09	378	0	(18.79)	(33.75)	(5.09)	(24.14)	(378)	(0.00)
12	18.60	33.74	5.09	375	10	18.60	33.74	5.09	24.18	375	0.04
32	15.16	33.48	5.43	317	20	18.60	33.74	5.09	24.18	375	0.08
42	12.06	33.19	5.22	278	30	16.00	33.51	5.37	24.63	332	0.11
52	11.52	33.24	5.00	265	50	11.61	33.23	5.07	25.31	267	0.17
67	10.93	33.39	4.58	243	75	10.68	33.44	4.47	25.64	236	0.23
82	10.50	33.48	4.35	230	100	9.96	33.63	3.78	25.91	210	0.29
102	9.83	33.65	3.69	206	125	9.04	33.84	3.32	26.23	180	0.34
127	9.01	33.85	3.30	179	150	8.73	33.90	3.07	26.32	171	0.38
147	8.80	33.89	3.12	173	200	8.04	34.04	1.83	26.53	151	0.47
177	8.29	34.02	2.42	155	250	7.70	34.16	1.41	26.69	136	0.54
207	8.00	34.05	1.66	149	300	7.26	34.18	1.24	26.76	130	0.61
237	7.84	34.16	1.42a)	139	400	6.66	34.27	0.70	26.91	115	0.74
276	7.42	34.15	1.39	134	500	6.22	34.35	0.52	27.03	104	0.85
336	7.02	34.23	0.91	123							
412	6.60	34.27	0.67	114							
485	6.29	34.34	0.53	105							
565	5.90	34.37	0.52	98							

87.60 SPENCER F. BAIRD; October 11, 1959; 1632 GCT; 33°01'N, 120°22'W; sounding, 600 fm; wind, 270°, force 1; weather, overcast; sea, slight; wire angle, 01°.

2	18.54	33.86	5.16	365	0	(18.54)	(33.86)	(5.16)	(24.28)	(365)	(0.00)
12	18.48	33.89	5.27	361	10	18.50	33.88	5.24	24.31	362	0.04
32	17.58	33.87	5.08	341	20	18.43	33.90	5.27	24.34	359	0.07
42	13.51	33.75	4.22	264	30	18.15	33.87	5.26	24.40	354	0.11
52	10.80	33.76	3.29	214	50	11.55	33.72	3.63	25.70	230	0.17
67	10.10	33.82	2.91	198	75	10.01	33.82	2.88	26.05	197	0.22
82	9.92	33.82	2.83	195	100	9.31	33.88	2.57	26.22	181	0.27
102	9.26	33.90	2.52	179	125	8.86	33.98	2.27	26.36	167	0.31
127	8.82	33.98	2.25	166	150	8.46	34.01	2.04	26.45	159	0.35
147	8.52	34.00	2.06	160	200	7.77	34.12	1.54	26.64	140	0.43
177	8.06	34.09	1.73	147	250	7.46	34.23	1.13	26.76	129	0.50
207	7.70	34.14	1.46	138	300	7.12	34.26	0.97	26.85	121	0.56
237	7.56	34.20	1.22	132	400	6.46	34.32	0.52	26.98	109	0.68
277	7.26	34.25	1.03	124	500	5.74	34.40	0.32	27.14	93	0.79
337	6.88	34.27	0.88	118							
412	6.38	34.33	0.45	106							
488	5.80	34.40	0.34	94							
568	5.51	34.42	0.29	90							

a) Alternate value, 1.84 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm³/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm³/g	ΔD dyn. m

87.70

SPENCER F. BAIRD; October 11, 1959; 1159 GCT; 32°41'N, 121°01'W; sounding, 2100 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 02°.

2	17.80	33.78	5.26	353	0	(17.80)	(33.78)	(5.26)	(24.41)	(353)	(0.00)
12	17.68	33.76	5.28	352	10	17.71	33.76	5.27	24.42	352	0.04
32	17.36	33.71	5.21	348	20	17.58	33.74	5.26	24.44	350	0.07
42	13.15	33.31	5.28	289	30	17.42	33.73	5.21	24.46	348	0.11
57	11.40	33.31	4.88	258	50	12.88	33.31	5.25	25.13	284	0.17
72	10.28	33.60	3.95	217	75	10.17	33.62	3.89	25.87	214	0.23
97	9.62a)	33.69	3.63	200	100	9.55	33.70	3.58	26.04	198	0.28
117	9.28	33.86	2.99	182	125	9.15	33.87	3.10	26.24	179	0.33
137	8.92	33.87	3.31	176	150	8.67	33.94	3.03	26.36	167	0.37
157	8.60	33.97	2.85	164	200	8.27	34.06	2.25	26.51	153	0.46
187	8.46	34.04	2.26	156	250	7.43	34.11	1.67	26.68	137	0.53
222	7.90	34.06	2.21	147	300	6.82	34.14	1.07	26.78	127	0.60
252	7.40	34.11	1.60	137	400	6.13	34.30	0.51	27.01	106	0.72
302	6.81	34.14	1.04	126	500	5.61	34.30	0.35	27.07	100	0.83
356	6.51	34.27	0.66	113	600	5.30	34.37	0.27	27.17	91	0.93
441	5.83	34.30	0.41	103							
526	5.52	34.31	0.30	98							
611	5.27	34.38	0.26	90							

87.80

SPENCER F. BAIRD; October 11, 1959; 0703 GCT; 32°20'N, 121°42.5'W; sounding, 2160 fm; wind, 240°, force 3; weather, cloudy; sea, rough; wire angle, 10°.

3	17.00	33.57	5.40	350	0	(17.00)	(33.57)	(5.40)	(24.44)	(350)	(0.00)
13	17.00	33.54	5.43	352	10	17.00	33.55	5.41	24.43	351	0.04
32	16.82	33.55	5.44	348	20	16.96	33.54	5.44	24.43	351	0.07
42	16.66	33.51	5.49	347	30	16.84	33.55	5.44	24.46	348	0.11
57	12.92	33.09	5.52	301	50	14.30	33.16	5.51	24.72	323	0.17
71	11.57	33.13	5.28	273	75	11.32	33.17	5.15	25.31	267	0.25
96	10.46b)	33.33	4.57	240	100	10.41	33.36	4.55	25.62	238	0.31
115	9.30	33.69	3.90	195	125	9.16	33.81	3.99	26.18	185	0.36
135	9.04	33.86	3.97	178	150	8.88	33.89	3.86	26.29	174	0.41
154	8.82	33.90	3.80	172	200	8.26	34.05	3.17	26.51	153	0.49
184	8.53	34.03	3.34	158	250	7.75	34.12	1.85	26.64	141	0.57
218	7.96	34.05	2.96	149	300	7.26	34.19	1.25	26.76	129	0.64
247	7.79	34.12	1.89	141	400	6.35	34.28	0.72	26.97	110	0.76
296	7.30	34.18	1.29	130	500	5.81	34.34	0.45	27.08	99	0.87
350	6.79	34.23	0.88	120	600	5.33	34.47	0.32	27.24	84	0.97
434	6.10	34.32	0.60	104							
518	5.74	34.34	0.41	98							
603	5.32	34.47	0.32	84							

87.90

SPENCER F. BAIRD; October 11, 1959; 0146 GCT; 31°58'N, 122°28.5'W; sounding, 2200 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 14°.

3	17.38	33.30	5.32	378	0	(17.38)	(33.30)	(5.32)	(24.14)	(378)	(0.00)
12	17.36	33.34	5.36	375	10	17.37	33.34	5.35	24.18	375	0.04
32	16.88	33.21	5.51	374	20	17.14	33.29	5.40	24.19	374	0.08
41	14.62	33.04	5.96	338	30	16.91	33.22	5.50	24.19	374	0.11
56	13.36	33.01	5.93	315	50	13.80	33.01	5.95	24.71	324	0.18
70	12.56	33.08	5.81	295	75	12.33	33.14	5.69	25.10	287	0.26
94	11.20	33.33	4.87	253	100	10.89	33.36	4.75	25.54	245	0.33
113	10.14	33.43	4.53	228	125	9.82	33.54	4.32	25.86	215	0.38
132	9.66	33.60	4.17	208	150	9.30	33.74	3.72	26.11	191	0.44
150	9.30	33.74	3.72	191	200	8.48	33.94	3.00	26.40	164	0.53
178	8.80	33.87	3.56	174	250	7.74	34.07	2.03	26.60	144	0.60
212	8.30	33.98	2.68	159	300	6.96	34.11	1.69	26.74	131	0.68
240	7.89	34.06	2.11	147	400	6.37	34.22	0.82	26.92	115	0.80
288	7.10	34.10	1.83	133	500	5.82	34.26	0.49	27.01	106	0.92
340	6.62	34.14	1.22	124	600	(5.32)	(34.36)	(0.44)	(27.05)	(92)	(1.02)
422	6.28	34.25	0.69	112							
505	5.79	34.26	0.47	105							
591	5.37	34.34	0.44	94							

a) Mean value of 9.54 and 9.69°C.
b) Mean value of 10.40 and 10.51°C.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm/g	ΔD dyn. m

90.28 SPENCER F. BAIRD; October 9, 1959; 0644 GCT; 33°28.5'N, 117°46.5'W; sounding, 200 fm; wind, 280°, force 1; weather, cloudy; sea, slight; wire angle, 00°.

1	20.20	33.75	5.23	413	0	(20.20)	(33.75)	(5.23)	(23.78)	(413)	(0.00)
6	20.16	33.77	5.30	411	10	19.90	33.76	5.37	23.86	405	0.04
11	19.44	33.70	5.43	398	20	17.00	33.58	5.54	24.45	349	0.08
16	18.49	33.66	5.55	378	30	15.02	33.56	5.00	24.88	308	0.11
21	16.72	33.58	5.53	343	50	14.09	33.55	5.00	25.07	290	0.17
26	15.56	33.55	5.48	320							
31	15.00	33.56	-	307							
36	14.71	33.53	4.76	304							
41	14.30	33.53	5.11	296							
46	14.24	-	5.18								
51	14.04	33.55	4.97	289							
56	13.90	33.54	4.94	287							
61	12.92	33.53	4.58	268							

90.32 SPENCER F. BAIRD; October 9, 1959; 0917 GCT; 33°20.5'N, 118°04'W; sounding, 420 fm; wind, missing, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

1	20.44	33.74	5.06	420	0	(20.44)	(33.74)	(5.06)	(23.70)	(420)	(0.00)
11	20.37	33.74	5.15	418	10	20.37	33.74	5.15	23.73	418	0.04
32	15.08	33.48	5.91	315	20	19.00	33.66	5.63	24.02	390	0.08
41	14.26	33.47	5.68	299	30	15.26	33.48	5.91	24.77	319	0.12
52	13.71	33.48	5.38	288	50	13.80	33.48	5.45	25.08	289	0.18
66	12.35	33.53	4.56	258	75	11.93	33.59	4.25	25.52	247	0.25
81	11.58	33.59	4.07	240	100	10.69	33.68	3.61	25.82	218	0.30
101	10.65	33.69	3.55	217	125	10.26	33.80	2.90	25.99	203	0.36
126	10.24	33.81	2.88	202	150	9.80	33.94	2.62	26.18	185	0.41
146	9.85	33.92	2.66	187	200	9.23	34.10	1.93	26.39	164	0.50
177	9.48	34.04	2.21	172	250	8.44	34.14	1.62	26.55	149	0.58
206	9.16	34.11	1.86	162	300	8.11	34.18	1.25	26.64	141	0.65
234	8.59	34.13	1.78	152	400	7.37	34.24	0.82	26.79	126	0.79
277	8.28	34.15	1.40	146	500	6.51	34.28	0.43	26.94	112	0.92
335	7.86	34.23	1.07	134							
412	7.28	34.25	0.77	124							
486	6.62	34.27	0.46	114							
566	6.12	34.34	0.31	103							

90.37 SPENCER F. BAIRD; October 9, 1959; 1205, 1240, 1300 GCT; 33°10.5'N, 118°23.5'W; sounding, 640+ fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 01°, 00°, 00°.

3	20.15	33.78	4.98	410	0	(20.15)	(33.78)	(4.98)	(23.81)	(410)	(0.00)
13	19.44	33.71	5.19	397	10	20.10	33.77	5.00	23.82	409	0.04
33	15.09	33.53	5.19	312	20	19.23	33.70	5.19	24.01	393	0.08
43	13.76	33.53	4.96	285	30	16.25	33.54	5.19	24.60	335	0.12
53	13.03	33.54	4.60	270	50	13.28	33.54	4.73	25.23	275	0.18
68	12.30	33.57	4.14	254	75	12.01	33.59	3.96	25.51	248	0.24
83	11.62	33.62	3.76	239	100	10.73	33.70	3.40	25.84	217	0.30
103	10.60	33.72	3.35	214	125	10.00	33.85	2.95	26.08	194	0.36
128	9.89	33.86	2.87	192	150	9.30	33.96	2.61	26.28	175	0.40
148	9.33	33.95	2.63	176	200	8.72	34.09	2.04	26.47	157	0.49
178	9.06	34.04	2.26	166	250	8.63	34.22	1.64	26.58	146	0.56
208	8.67	34.13	1.92	153	300	8.07	34.20	1.47	26.66	139	0.64
239	8.72	34.22	1.71	147	400	7.22	34.30	0.81	26.86	120	0.77
279	8.30	34.19	1.49	143	500	6.40	34.34	0.41	27.01	106	0.89
339	7.68	34.25	1.39	130							
413	7.12	34.30	0.73	118							
488	6.48	34.34	0.43	108							
570	5.98	34.34	0.36	101							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

SPENCER F. BAIRD; October 9, 1959; 1705 GCT; 32°54.5'N, 118°56'W; sounding, 950 fm; wind, 360°, force 1; weather, partly cloudy; sea, moderate; wire angle, 05°. 90.45

2	18.40	33.71	5.12	372	0	(18.40)	(33.71)	(5.12)	(24.21)	(372)	(0.00)
12	18.34	33.69	5.18	372	10	18.35	33.70	5.17	24.21	372	0.04
32	15.76	33.55	5.10	324	20	18.29	33.68	5.18	24.21	372	0.07
42	13.93	33.48	4.94	292	30	17.50	33.63	5.16	24.36	358	0.11
52	13.20	33.46	4.89	279	50	13.34	33.46	4.90	25.17	281	0.17
67	12.22	33.48	4.61	260	75	11.85	33.54	4.40	25.50	249	0.24
81	11.55a)	33.60	4.19	239	100	10.42	33.67	3.70	25.86	214	0.30
101	10.41b)	33.67	3.69	214	125	9.71	33.78	3.34	26.07	195	0.35
126	9.69	33.78	3.31	195	150	9.23	33.83	2.42	26.18	184	0.40
146	9.30	33.82	2.41	186	200	8.71	34.02	1.56	26.42	162	0.49
175	8.86	33.89	2.73	174	250	8.31	34.16	1.68	26.58	146	0.57
206	8.66	34.04	1.42	160	300	7.85	34.22	1.22	26.70	134	0.64
236	8.36	34.10	1.83	150	400	7.12	34.32	0.72	26.88	118	0.77
275	8.27	34.25	1.33	138	500	6.46	34.38	0.48	27.04	103	0.89
335	7.40	34.20	1.04	130							
410	7.08	34.33	0.68	116							
484	6.56	34.40	0.50	104							
564	6.04	34.35	0.41	101							

SPENCER F. BAIRD; October 9, 1959; 1956 GCT; 32°44.5'N, 119°13.5'W; sounding, 65 fm; wind, 360°, force 2; weather, partly cloudy; sea, rough; wire angle, 07°. 90.50

2	18.62	33.72	5.89	377	0	(18.62)	(33.72)	(5.89)	(24.16)	(377)	(0.00)
12	18.52	33.71	5.15	375	10	18.54	33.71	5.20	24.17	376	0.04
32	17.22	33.62	5.42	352	20	18.42	33.70	5.15	24.20	373	0.08
51	14.03	33.41	5.53	300	30	18.15	33.69	5.19	24.25	368	0.11
76	12.72	33.46	4.80	270	50	14.20	33.42	5.53	24.95	302	0.18
101	11.27	33.58	4.11	236	75	12.76	33.45	4.86	25.26	272	0.25
					100	11.29	33.58	4.12	25.64	236	0.32

SPENCER F. BAIRD; October 10, 1959; 0010 GCT; 32°33'N, 119°39'W; sounding, 200 fm; wind, 230°, force 6; weather, cloudy; sea, rough; wire angle, 14°. 90.55

3	18.58	33.64	5.17	382	0	(18.58)	(33.64)	(5.17)	(24.11)	(382)	(0.00)
13	18.59	33.65	5.30	382	10	18.59	33.65	5.27	24.11	382	0.04
32	18.45	33.64	5.27	378	20	18.59	33.66	5.30	24.12	381	0.08
52	14.40	33.40	5.79	307	30	18.53	33.65	5.28	24.14	379	0.11
76	12.51	33.45	5.00	267	50	14.72	33.41	5.79	24.83	313	0.18
100	10.98	33.55	4.35	232	75	12.52	33.45	5.01	25.31	267	0.26
125	9.77	33.69	3.74	202	100	10.98	33.55	4.35	25.68	232	0.32
163	8.58	33.93	2.88	167	125	9.77	33.69	3.74	26.00	202	0.38
202	8.33	34.00	2.47	158	150	8.90	33.88	3.15	26.28	175	0.42
251	7.75	34.13	1.71	140	200	8.34	34.00	2.50	26.46	158	0.51
300	7.43	34.13	1.40	136	250	7.76	34.13	1.72	26.65	140	0.58
					300	7.43	34.13	1.40	26.69	136	0.66

a) Alternate value, 11.34°C, not used in interpolation.
b) Alternate value, 10.72°C, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

90.60 SPENCER F. BAIRD; October 10, 1959; 0250 GCT; 32°23.5'N, 120°00'W; sounding, 485 fm; wind, 280°, force 3; weather, cloudy; sea, very rough; wire angle, 17°.

3	18.18	33.62	5.21	373	0	(18.18)	(33.62)	(5.21)	(24.20)	(373)	(0.00)
12	18.18	33.64	5.25	372	10	18.18	33.64	5.25	24.21	372	0.04
32	17.94	33.66	5.28	365	20	18.17	33.65	5.26	24.22	371	0.07
41	14.16	33.30	5.75	310	30	18.05	33.66	5.27	24.26	367	0.11
55	12.68	33.19	5.57	290	50	13.03	33.19	5.67	25.00	296	0.18
70	11.28	33.29	4.91	257	75	11.11	33.35	4.70	25.49	250	0.25
93	10.45	33.54	4.06	225	100	10.18	33.60	3.94	25.85	216	0.30
111	9.76	33.70	3.70	202	125	9.26	33.80	3.39	26.16	187	0.36
130	9.12	33.82	3.31	183	150	8.89	33.90	3.06	26.30	173	0.40
148	8.89	33.89	3.08	174	200	8.26	34.04	2.32	26.50	154	0.48
176	8.60	33.96	2.80	165	250	7.79	34.15	1.57	26.66	138	0.56
208	8.15	34.07	2.15	150	300	7.28	34.20	1.12	26.77	128	0.63
236	7.96	34.13	1.79	143	400	6.77	34.27	0.62	26.90	116	0.76
282	7.42	34.20	1.19	130	500	6.15	34.36	0.37	27.05	102	0.87
333	7.10	34.22	0.95	124							
414	6.70	34.29	0.57	114							
495	6.18	34.35	0.39	103							
578	5.59	34.40	0.26	92							

90.70 SPENCER F. BAIRD; October 10, 1959; 0838 GCT; 32°02'N, 120°42.5'W; sounding, 2100 fm; wind, 120°, force 4; weather, overcast; sea, very rough; wire angle, 20°.

3	17.70	33.64	5.23	361	0	(17.70)	(33.64)	(5.23)	(24.32)	(361)	(0.00)
13	17.70	33.65	5.23	360	10	17.70	33.65	5.23	24.33	360	0.04
37	17.69	33.68	5.22	358	20	17.70	33.66	5.23	24.34	360	0.07
46	14.20	33.22	5.68	316	30	17.70	33.67	5.23	24.35	359	0.11
60	12.22	33.09	5.48	288	50	13.20	33.12	5.64	24.92	304	0.17
75	11.83	33.22	5.16	272	75	11.83	33.22	5.16	25.26	272	0.25
97	10.72	33.48	4.34	233	100	10.54	33.51	4.28	25.72	228	0.31
115	9.94	33.68	3.89	206	125	9.60	33.73	3.67	26.05	197	0.36
133	9.34	33.77	3.47	190	150	8.79	33.88	3.15	26.30	173	0.41
161	8.54	33.96	2.92	164	200	8.08	34.06	2.47	26.54	150	0.49
189	8.22	34.05	2.55	152	250	7.63	34.13	1.76	26.66	139	0.57
225	7.78	34.06	2.22	145	300	7.03	34.16	1.21	26.78	128	0.64
253	7.61	34.13	1.70	138	400	6.40	34.25	0.70	26.94	113	0.76
300	7.03	34.16	1.21	128	500	5.80	34.32	0.44	27.07	100	0.87
362	6.66	34.22	0.85	118	600	5.29	34.38	0.31	27.17	91	0.97
457	6.00	34.28	0.51	106							
543	5.59	34.36	0.37	95							
618	5.20	34.38	0.29	89							

90.80 SPENCER F. BAIRD; October 10, 1959; 1430 GCT; 31°40'N, 121°25'W; sounding, 2000+ fm; wind, 300°, force 5; weather, overcast; sea, very rough; wire angle, 29°.

2	17.90	33.48	4.99	377	0	(17.90)	(33.48)	(4.99)	(24.16)	(377)	(0.00)
11	17.90	33.49	5.19	376	10	17.90	33.49	5.19	24.17	376	0.04
32	17.92	33.46	5.24	379	20	17.91	33.48	5.21	24.16	377	0.08
40	17.62	33.44	5.12	374	30	17.92	33.46	5.24	24.13	379	0.11
52	14.77	33.19	5.76	330	50	15.23	33.24	5.73	24.59	336	0.18
64	13.76	33.24	5.19	306	75	13.39	33.34	5.12	25.05	292	0.26
85	13.03	33.45	5.05	277	100	11.87	33.49	4.65	25.46	253	0.33
100	11.87	33.49	4.65	253	125	9.92	33.59	4.21	25.89	212	0.39
115	10.51	33.52	4.36	227	150	9.10	33.76	3.62	26.15	188	0.44
139	9.27	33.68	3.91	196	200	8.38	34.00	3.30	26.45	159	0.53
162	8.94	33.82	3.34	180	250	7.88	34.10	1.88	26.60	144	0.61
194	8.45	33.98	3.37	161	300	7.41	34.16	1.31	26.72	133	0.68
218	8.14	34.03	2.86	153	400	(6.49)	(34.26)	(0.64)	(26.93)	(113)	(0.81)
258	7.81	34.11	1.75	142							
311	7.30	34.16	1.22	132							
391	6.56	34.25	0.69	115							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
SPENCER F. BAIRD; October 10, 1959; 2003 GCT; 31°16.5'N, 122°09'W; sounding, 2200 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 11°.											90.90
3	18.70	33.40	5.20	402	0	(18.70)	(33.40)	(5.20)	(23.89)	(402)	(0.00)
13	18.68	33.43	5.14	400	10	18.69	33.43	5.18	23.91	400	0.04
37	18.59	33.39	5.11	400	20	18.66	33.42	5.13	23.92	400	0.08
67	14.70	33.21	5.83	327	30	18.62	33.40	5.12	23.92	400	0.12
76	14.14	33.34	5.54	306	50	18.20	33.34	5.15	23.98	394	0.20
96	12.80	33.38	4.98	277	75	14.25	33.34	5.55	24.87	309	0.29
111	11.96	-	4.66		100	12.58	33.42	4.89	25.27	271	0.36
126	10.84	33.55	4.25	230	125	10.93	33.55	4.26	25.69	231	0.42
155	9.64	33.67	3.83	202	150	9.89	33.65	3.89	25.94	208	0.48
175	9.00	33.81	3.72	182	200	8.58	33.94	3.40	26.38	166	0.58
204	8.49	33.95	3.33	164	250	7.72	34.04	2.62	26.58	146	0.66
239	7.86	34.04	2.81	148	300	7.05	34.10	1.97	26.72	133	0.73
268	7.47	34.04	2.30	143	400	6.08	34.18	0.87	26.92	114	0.86
317	6.85	34.13	1.76	128	500	5.52	34.30	0.49	27.09	99	0.97
382	6.20	34.16	0.96	117	600	5.08	34.36	0.32	27.18	90	1.07
481	5.62	34.29	0.53	101							
570	5.20	34.33	0.36	93							
644	4.91	34.38	0.28	86							
ORCA; October 9, 1959; 0034 GCT; 32°55'N, 117°21.5'W; sounding, 325 fm; wind, 290°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°.											93.28
1	20.52	33.70	5.32	425	0	(20.52)	(33.70)	(5.32)	(23.65)	(425)	(0.00)
11	20.00	33.69	5.44	412	10	20.01	33.69	5.44	23.78	413	0.04
31	16.02	33.52	5.48	332	20	18.15	33.61	5.48	24.19	374	0.08
51	14.10	33.49	5.17	295	30	16.04	33.51	5.48	24.61	334	0.12
76	12.32	33.53	4.23	258	50	14.18	33.49	5.20	25.01	296	0.18
101	11.48	33.58	3.84	239	75	12.42	33.53	4.30	25.38	260	0.25
126	10.79	33.59	3.82	226	100	11.49	33.58	3.85	25.60	240	0.31
166	10.05	33.73	3.15	205	125	10.80	33.59	3.82	25.73	227	0.37
206	9.62	33.94	2.34	182	150	10.36	33.67	3.50	25.87	214	0.43
256	9.36	34.13	1.61	163	200	9.70	33.90	2.47	26.17	186	0.53
306	8.96	34.20	1.19	152	250	9.39	34.12	1.72	26.39	165	0.62
410	7.50	34.22	0.78	130	300	9.01	34.19	1.22	26.50	154	0.70
					400	7.64	34.22	0.78	26.74	132	0.85
SPENCER F. BAIRD; October 9, 1959; 0209 GCT;[a] 32°55'N, 117°21.5'W; sounding, 324 fm; wind, 290°, force 1; weather, partly cloudy; sea, slight; wire angle, 02°.											93.28
178	9.80	33.93	3.02	185							
188	9.69	33.93	3.09	183							
198	9.64	33.98	2.88	179							
208	9.61	34.00	2.89	177							
218	9.55	34.06	2.57	172							
228	9.49	34.09	2.41	168							
238	9.40	34.08	2.32	168							
248	9.34	34.16	-	161							
257	9.27	34.18	1.86	159							
267	9.23	34.19	1.81	157							
277	9.12	34.21	1.69	154							
287	9.03	34.27	1.58	148							
297	8.83	34.23	1.47	148							
307	8.73	34.24	1.44	146							
317	8.43	34.24	1.49	142							
327	8.36	34.22	1.48	142							
337	8.22	34.20	1.42	142							
347	8.03	34.22	1.38	137							

a) Test cast.

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m
93.30	ORCA; October 9, 1959; 0449 GCT; 32°50.5'N, 117°31.5'W; sounding, 425 fm; wind, 290°, force 2; weather, clear; sea, slight; wire angle, 03°.										
0	20.62	33.78	5.08	422	0	20.62	33.75	5.08	23.68	422	0.00
10	20.47	33.76	5.11	420	10	20.47	33.76	5.11	23.71	420	0.04
30	17.29	33.52	5.61	359	20	19.00	33.63	5.36	24.00	392	0.08
40	15.41	33.46	5.73	324	30	17.29	33.52	5.61	24.34	359	0.12
55	14.03	33.51	5.17	292	50	14.87	33.52	5.45	24.88	308	0.19
70	12.63	33.49	4.87	267	75	12.13	33.49	4.78	25.42	257	0.26
95	10.61	33.58	4.42	225	100	10.44	33.62	4.17	25.82	218	0.32
115	10.14	33.73	3.39	206	125	10.13	33.76	3.20	25.98	203	0.37
135	10.12	33.79	3.02	201	150	9.82	33.86	2.85	26.11	191	0.42
155	9.76	33.89	2.75	188	200	9.53	34.00	2.30	26.27	176	0.52
185	9.61	33.96	2.41	180	250	9.17	34.14	1.67	26.44	160	0.60
220	9.40	34.05	2.08	170	300	8.98	34.26	1.22	26.57	148	0.68
250	9.17	34.14	1.67	160	400	7.42	34.26	0.80	26.80	126	0.82
300	8.98	34.26	1.22	148	500	6.48	34.31	0.46	26.97	110	0.95
355	7.91	34.23	1.10	135	600	5.86	34.36	0.29	27.08	99	1.06
439	6.96	34.28	0.59	118							
524	6.32	34.32	0.40	107							
609	5.84	34.36	0.28	98							
93.35	ORCA; October 9, 1959; 0801 GCT;[a] 32°40'N, 117°51.5'W; sounding, 370 fm; wind, 290°, force 1; weather, clear; sea, slight; wire angle, 00°.										
10	19.57	33.69	5.36	402							
438	6.91	34.23	0.65	121							
441	6.91	34.23	0.64	121							
465	6.76	34.25	0.52	118							
468	6.74	34.24	0.52	118							
471	6.72	34.25	0.53	117							
496	6.55	34.27	0.45	114							
499	6.52	34.26	0.46	114							
502	6.54	34.25	0.46	115							
527	6.35	34.29	0.42	109							
530	6.35	34.25	0.42	112							
533	6.32	34.28	0.40	110							
558	6.18	34.31	0.38	106							
561	6.18	34.29	0.38	107							
564	6.16	34.31	0.37	105							
589	5.88	34.31	0.31	103							
592	5.88	34.31	0.31	103							
595	5.87	34.32	0.31	102							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.40

ORCA; October 9, 1959; 1121 GCT; 32°29'N, 118°12'W; sounding, 850 fm; wind, 290°, force 1; weather, clear; sea, slight; wire angle, 05°.

1	19.60	33.65	5.06a)	406	0	(19.60)	(33.65)	(5.06)	(23.85)	(406)	(0.00)
11	19.36	33.66	5.13	399	10	19.42	33.66	5.11	23.91	400	0.04
31	16.52	33.49	5.91	346	20	18.50	33.62	5.37	24.11	382	0.08
41	16.01	33.46	5.80	336	30	16.63	33.50	5.89	24.46	348	0.12
51	14.18	33.49	6.10	296	50	14.25	33.49	6.09	24.99	298	0.18
66	12.90	33.49	5.81	272	75	12.09	33.48	5.00	25.42	257	0.25
81	11.68	33.48	4.67	250	100	10.80	33.50	4.58	25.67	233	0.31
101	10.79	33.51	4.57	233	125	9.72	33.62	4.00	25.94	208	0.37
126	9.70	33.62	3.98	207	150	9.51	33.78	3.30	26.10	192	0.42
146	9.54	33.75	3.41	194	200	8.72	33.90	2.74	26.32	171	0.51
176	9.27	33.91	2.61	179	250	8.38	34.01	2.20	26.46	158	0.60
205	8.61	33.90	2.76	169	300	8.22	34.13	1.39	26.58	146	0.67
235	8.35	33.97	2.43	160	400	7.51	34.25	0.89	26.78	128	0.82
275	8.43	34.09	1.75	153	500	6.69	34.23	0.54	26.88	118	0.95
335	7.98	34.19	1.09	138							
409	7.43	34.25	0.86	127							
484	6.80	34.23	0.55	120							
565	6.32	34.27	0.48	111							

93.50

ORCA; October 9, 1959; 1705 GCT; 32°10'N, 118°54'W; sounding, 800 fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 03°.

1	19.11	33.66	4.85	393	0	(19.11)	(33.66)	(4.85)	(23.99)	(393)	(0.00)
11	19.06	33.64	4.73	393	10	19.06	33.64	4.74	23.99	393	0.04
31	18.94	33.62	5.33	392	20	19.03	33.63	4.94	23.99	393	0.08
41	15.21	33.33	5.25	329	30	18.95	33.62	5.33	24.00	392	0.12
51	14.35	33.37	5.04	308	50	14.37	33.37	5.05	24.87	309	0.19
66	13.26	33.40	5.04	285	75	12.97	33.40	5.07	25.18	279	0.26
81	12.86	33.40	5.07	277	100	10.89	33.55	3.97	25.68	232	0.33
101	10.88	33.55	3.96	231	125	9.97	33.68	3.47	25.95	206	0.38
125	9.97	33.68	3.47	206	150	9.39	33.77	3.30	26.11	191	0.43
145	9.40	33.75	3.35	193	200	9.21	34.06	1.86	26.37	167	0.52
175	9.32	33.89	2.65	181	250	8.49	34.14		26.54	150	0.60
206	9.19	34.09	1.74	164	300	7.77	34.11		26.64	141	0.68
235	8.92	34.18	1.45	153	400	6.81	34.21	0.82	26.85	121	0.82
274	7.94	34.08	-	146	500	6.40	34.28	0.39	26.96	111	0.94
334	7.41	34.17	1.08	133							
409	6.76	34.22	0.78	120							
484	6.51	34.27	0.42	113							
563	5.98	34.30	0.28	104							

93.60

ORCA; October 9, 1959; 2332 GCT; 31°50'N, 119°32'W; sounding, 1220 fm; wind, 290°, force 3; weather, cloudy; sea, very rough; wire angle, 12°.

1	18.85	33.59	5.39	392	0	(18.85)	(33.59)	(5.39)	(24.00)	(392)	(0.00)
11	18.84	33.58	5.45	392	10	18.84	33.58	5.45	24.00	392	0.04
30	18.76	33.58	5.29	390	20	18.82	33.58	5.40	24.00	392	0.08
40	16.09	33.39	6.11	343	30	18.76	33.58	5.29	24.02	390	0.12
50	15.56	33.40	6.02	331	50	15.56	33.40	6.02	24.64	331	0.19
64	14.71	33.43	5.86	311	75	13.72	33.35	5.62	25.01	297	0.27
79	13.40	33.33	5.52	293	100	11.80	33.45	4.89	25.45	254	0.34
99	11.86	33.45	4.91	255	125	10.50	33.54	4.10	25.75	225	0.40
122	10.51	33.54	4.11	226	150	9.39	33.73	3.64	26.08	194	0.45
142	9.50	33.67	3.86	200	200	8.33	33.93	2.87	26.41	163	0.54
171	9.04	33.83	3.17	182	250	7.75	33.98	2.18	26.54	151	0.62
201	8.32	33.93	2.86	163	300	7.39	34.09	1.56	26.67	138	0.70
230	8.02	33.96	2.40	157	400	6.60	34.20	0.66	26.87	119	0.83
269	7.58	34.02	1.98	146	500	6.00	34.26	0.38	26.99	108	0.95
327	7.21	34.13	1.22	133							
402	6.59	34.20	0.64	119							
476	6.14	34.24	0.42	111							
555	5.76	34.31	0.30	101							

a) The oxygen samples for this station were titrated by an inexperienced operator and must be considered doubtful.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

93.70 ORCA; October 10, 1959; 0603 GCT; 31°30'N, 120°14'W; sounding, 2000+ fm; wind, 290°, force 5; weather, cloudy; sea, very rough; wire angle, 18°.

2	18.46	33.60	5.18	382	0	(18.46)	(33.60)	(5.18)	(24.10)	(382)	(0.00)
12	18.45	33.59	5.24	382	10	18.45	33.59	5.24	24.10	382	0.04
31	18.42	33.58	5.22	382	20	18.45	33.59	5.23	24.10	382	0.08
41	18.33	33.60	5.22	378	30	18.43	33.58	5.22	24.10	382	0.11
55	14.66	33.40	5.88	313	50	15.70	33.47	5.80	24.66	329	0.19
69	13.27	33.33	5.36	290	75	12.99	33.32	5.23	25.12	285	0.26
93	11.62	33.51	4.29	247	100	11.50	33.52	4.28	25.56	244	0.33
112	10.34	33.52	4.17	224	125	9.61	33.64	3.73	25.98	204	0.39
131	9.44	33.68	3.61	198	150	9.08	33.78	3.53	26.17	186	0.44
150	9.08	33.78	3.53	186	200	8.34	33.93	2.77	26.40	164	0.52
179	8.71	33.86	2.96	174	250	7.55	34.02	1.87	26.59	146	0.60
211	8.18	33.96	2.62	158	300	6.90	34.05	1.39	26.71	134	0.68
234a)	7.79	34.00	2.04	150	400	6.01	34.14	0.70	26.90	116	0.81
272a)	7.24	34.04	1.68	140	500	5.50	34.22	0.40	27.03	104	0.92
315a)	6.72	34.06	1.24	132							
380a)	6.14	34.12	0.80	120							
449a)	5.75	34.20	0.49	109							
518a)	5.42	34.24	0.38	102							

93.80 ORCA; October 10, 1959; 1136 GCT; 31°08'N, 120°56'W; sounding, 2000+ fm; wind, 290°, force 5; weather, overcast; sea, very rough; wire angle, 20°.

1	18.46	33.39	5.33	397	0	(18.46)	(33.39)	(5.33)	(23.95)	(397)	(0.00)
10	18.44	33.35	5.28	399	10	18.44	33.35	5.28	23.93	399	0.04
29	18.42	33.37	5.21	397	20	18.43	33.36	5.23	23.94	398	0.08
38	17.72	33.30	5.50	386	30	18.42	33.37	5.21	23.95	397	0.12
53	14.18	33.01	6.14	331	50	14.40	33.01	6.14	24.60	336	0.19
67	13.52	33.08	5.94	314	75	13.09	33.13	5.67	24.96	301	0.27
88	12.55	33.19	5.39	287	100	12.13	33.35	5.12	25.30	268	0.35
107	12.02	33.40	5.03	262	125	10.54	33.49	4.48	25.70	230	0.41
125	10.54	33.49	4.48	230	150	9.57	33.62	3.78	25.96	205	0.46
142	9.78	33.57	4.02	212	200	8.64	33.86	2.86	26.31	172	0.56
169	9.17	33.73	3.24	190	250	8.00	34.02	2.05	26.53	151	0.64
201	8.61	33.87	2.85	172	300	7.34	34.08	1.07	26.67	138	0.72
228	8.17	33.96	2.36	158	400	6.65	34.14	0.53	26.82	124	0.85
273	7.75	34.06	1.68	145	500	5.71	34.18	0.35	26.97	110	0.98
324	7.05	34.10	0.69	133							
403	6.61	34.14	0.52	124							
483	5.80	34.16	0.37	112							
566	5.36	34.25	0.32	100							

a) Posttrip; depth uncertain.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_T $_{10^{-5}}$ $_3$ cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T $_{10^{-5}}$ $_3$ cm/g	ΔD dyn. m

93.90

ORCA; October 10, 1959; 2105, 1745 GCT; 30°47'N, 121°37'W; sounding, 2000+ fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 08°, 20°.

1a)	18.96	33.37	5.16	410	0						(0.00)
11	18.94	33.37	5.16	410	10						0.04
30	18.90	33.36	5.20	410	20						0.08
59	17.16	33.58	5.66	353	30						0.12
68	16.14	33.51	5.78	336	50						0.20
81	15.71	33.61	5.72	319	75						0.29
95	15.31	33.66	5.57	307	100						0.37
109	14.18	33.65	5.35	284	125						0.44
130	11.79	33.58	4.95	244	150						0.50
146	10.86	33.57	4.56	229	200						0.60
169	9.42	33.69	4.15	197	250	7.97	33.98	2.50	26.40	154	0.68
191	8.82	33.81	3.63	180	300	7.46	34.01	1.92	26.60	145	0.76
214	8.48	33.87	3.40	170	400	6.52	34.08	0.93	26.78	127	0.90
252	7.88	33.96	2.63	154	500	5.77	34.18	0.44	26.96	110	1.03
295	7.27	34.03	1.97	141	600	5.24	34.28	0.22	27.09	98	1.14
363	6.69	34.09	1.24	129	700	4.84	34.34	0.22	27.20	88	1.24
432	6.17	34.16	0.71	117	800	4.54	34.38	0.25	27.26	82	1.33
506	5.68	34.22	0.39	107	1000	3.82	34.46	0.43	27.40	69	1.50
					1200	3.40	34.50	0.72	27.48	62	1.65
250	7.97	33.98	2.50	154	1500	2.80	34.55	1.05	27.57	53	1.85
347	7.06	34.04	1.37	138	2000	2.08	34.63	1.80	27.69	42	2.13
444	6.12	34.13	0.63	118	2500	1.82	34.63	2.10			
541	5.52	34.22	0.32	105	3000	(1.65)	(34.64)	(2.44)			
640	5.06	34.31	0.20	93							
834	4.42	34.39	0.26	80							
1032	3.74	34.47	0.47	67							
1228	3.35	34.51	0.75	61							
1424	2.94	34.54	0.95	55							
1620	2.58	34.57	1.24	50							
1814	2.28	34.61	1.53	44							
2008	2.08	34.63	1.83	41							
2205	1.97	34.62	1.99	41							
2400	1.86	34.63	2.05	40							
2596	1.78	34.62u	2.22								
2792	1.70	34.64	2.29	38							
2889	1.69	34.63u	2.40								
2988	1.66	34.64	2.44	37							

97.30

ORCA; October 12, 1959; 1454 GCT; 32°15'N, 117°09'W; sounding, 33 fm; wind, 330°, force 2; weather, fog; sea, slight; wire angle, 01°.

1	20.32	33.75	5.02	416	0	(20.32)	(33.75)	(5.02)	(23.74)	(416)	(0.00)
11	20.34	33.75	5.19	417	10	20.33	33.75	5.18	23.73	417	0.04
31	15.51	33.40	5.84	330	20	20.22	33.73	5.23	23.76	415	0.08
51	14.05	33.50	5.17	293	30	15.70	33.41	5.84	24.61	334	0.12
					50	14.10	33.50	5.18	25.03	294	0.18

a) The Nansen bottles of the shallow cast appear to have posttripped; the depths are too uncertain for interpolation. The values of δ_T were compared with the preceding station, and they are believed to be accurate enough to be used with those of the deep cast in the calculation of ΔD.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
97.32	ORCA; October 12, 1959; 1321 GCT; 32°11.5'N, 117°17'W; sounding, 700 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.										
1	20.26	33.66	5.00	422	0	(20.26)	(33.66)	(5.00)	(23.68)	(422)	(0.00)
11	20.28	33.66	5.07	422	10	20.28	33.66	5.07	23.68	422	0.04
31	17.74	33.40	5.61	380	20	20.15	33.64	5.11	23.71	420	0.08
41	15.85	33.28	5.88	346	30	18.90	33.51	5.38	23.93	399	0.13
51	15.18	33.35	5.83	327	50	15.21	33.34	5.84	24.67	328	0.20
66	14.38	33.43	5.55	304	75	13.65	33.50	5.29	25.12	285	0.27
80	13.44	33.51	5.21	281	100	11.76	33.51	4.56	25.50	249	0.34
100	11.76	33.51	4.56	249	125	10.39	33.57	4.01	25.80	221	0.40
124	10.40	33.57	4.01	222	150	9.92	33.67	3.72	25.95	206	0.46
144	10.04	33.62	3.85	213	200	9.17	33.95	2.55	26.29	174	0.55
174	9.37	33.85	3.09	184	250	8.79	34.12	1.77	26.48	156	0.64
203	9.14	33.96	2.50	173	300	8.34	34.19	1.32	26.60	144	0.72
233	8.89	34.05	1.96	161	400	7.65	34.29	0.88	26.79	127	0.86
272	8.62	34.16	1.53	150	500	6.62	34.28	0.44	26.93	114	0.98
332	8.08	34.22	1.13	138							
406	7.60	34.29	0.84	126							
480	6.78	34.28	0.48	116							
560	6.28	34.31	0.38	108							
97.32	ORCA; October 15, 1959; 0405 GCT;[a] 32°11.5'N, 117°17'W; sounding, 750 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 15°.										
427	7.18	34.31	0.55	119							
430	7.17	34.32	0.42	118							
433	7.16b)	34.29	0.51	120							
457	6.90	34.29	0.40	116							
461	6.86	34.31	0.43	115							
463	6.86	34.31	0.42	115							
488	6.60	34.34	0.32	109							
491	6.54	34.33	0.32	109							
494	6.52	34.34	0.32	108							
518	6.41	34.36	0.21	105							
521	6.28	34.33	0.51	106							
524	6.24	34.34	0.34	104							
549	6.04	34.36	0.25	101							
552	6.03	34.34	0.47	102							
579	5.84	34.38	0.26	97							
582	5.82	34.37	0.24	97							
585	5.79	34.38	0.21	96							
97.40	ORCA; October 12, 1959; 0805 GCT; 31°53'N, 117°50'W; sounding, 400 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 04°.										
1	19.94	33.69	5.14	411	0	(19.94)	(33.69)	(5.14)	(23.80)	(411)	(0.00)
11	19.96	33.69	5.11	411	10	19.96	33.69	5.12	23.80	411	0.04
31	19.34	33.66	5.30	398	20	19.95	33.69	5.12	23.80	411	0.08
42	16.32	33.40	5.27	348	30	19.42	33.67	5.28	23.92	400	0.12
52	14.95	33.46	5.13	314	50	15.40	33.45	5.15	24.70	325	0.20
67	14.04	33.46	5.24	296	75	13.72	33.47	5.13	25.09	288	0.27
82	13.10	33.50	4.79	275	100	11.82	33.56	4.17	25.53	246	0.34
102	11.68	33.57	4.13	244	125	10.32	33.59	4.09	25.82	219	0.40
126	10.29	33.59	4.08	218	150	9.69	33.68	3.55	25.99	203	0.45
146	9.84	33.66	3.61	206	200	8.99	34.02	2.24	26.38	166	0.55
176	9.07	33.84	3.03	181	250	8.73	34.15	1.53	26.52	152	0.63
206	8.98	34.05	2.07	164	300	8.13	34.19	1.21	26.64	141	0.70
236	8.88	34.13	1.64	156	400	6.89	34.23	0.61	26.85	121	0.84
275	8.40	34.18	1.33	146	500	6.17	34.28	0.36	27.00	107	0.96
335	7.78	34.20	1.03	135							
410	6.78	34.23	0.55	119							
484	6.29	34.28	0.38	109							
564	5.78	34.32	0.29	100							

a) Test cast.

b) Alternate value, 7.07°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

ORCA; October 12, 1959; 0136 GCT; 31°34'N, 118°28'W; sounding, 1300+ fm; wind, 310°, force 3; weather, overcast; sea, slight; wire angle, 18°. 97.50

1	19.33	33.54	5.53	407	0	(19.33)	(33.54)	(5.53)	(23.84)	(407)	(0.00)
10	19.26	33.53	5.13	406	10	19.26	33.53	5.13	23.85	406	0.04
29	18.84	33.51	5.28	397	20	19.03	33.52	5.20	23.90	401	0.08
39	17.32	33.39	5.59	371	30	18.83	33.51	5.28	23.95	397	0.12
48	15.91	33.31	5.84	345	50	15.80	33.30	5.84	24.51	343	0.19
62	14.50	33.21	5.81	323	75	14.00	33.29	5.63	24.89	307	0.28
76	13.92	33.30	5.59	305	100	12.97	33.44	5.18	25.21	277	0.35
96	13.05	33.42	5.20	280	125	10.92	33.56	4.32	25.69	231	0.42
118	11.48	33.51	4.81	244	150	9.89	33.70	3.54	25.98	204	0.47
137	10.26	33.64	3.79	214	200	9.04	33.97	2.35	26.32	171	0.56
165	9.54	33.78	3.23	192	250	8.42	34.05	1.97	26.49	155	0.65
193	9.09	33.95	2.46	173	300	7.82	34.10	1.52	26.62	143	0.73
221	8.91	34.04	2.02	163	400	7.23	34.22	0.89	26.80	126	0.87
259	8.25	34.06	1.97	152	500	6.33	34.27	0.38	26.96	111	0.99
315	7.73	34.13	1.39	140							
386	7.36	34.22	0.98	128							
457	6.65	34.23	0.51	118							
536	6.11	34.31	0.31	105							

ORCA; October 11, 1959; 1845 GCT; 31°08'N, 119°18'W; sounding, 1800+ fm; wind, 310°, force 2; weather, cloudy; sea, moderate; wire angle, 02°. 97.60

1	19.65	33.91	5.01	388	0	(19.65)	(33.91)	(5.01)	(24.04)	(388)	(0.00)
11	19.51	33.91	5.07	384	10	19.52	33.91	5.07	24.07	385	0.04
31	19.44	33.91	5.04	383	20	19.46	33.91	5.06	24.09	384	0.08
41	19.10a)	33.90	4.99	375	30	19.44	33.91	5.05	24.10	383	0.12
51	14.71	33.68	5.05	293	50	15.00	33.69	5.05	24.98	299	0.18
66	10.77	33.65	3.34	222	75	10.30	33.71	3.09	25.92	209	0.25
81	9.88	33.76	2.86	199	100	9.53	33.80	2.66	26.11	191	0.30
101	9.52	33.80	2.65	190	125	9.14	33.87	2.44	26.24	179	0.34
126	9.11	33.87	2.43	179	150	8.76	33.94	2.30	26.35	168	0.39
146	8.80	33.93	2.37	170	200	8.22	34.10	1.62	26.56	149	0.47
176	8.52	34.02	1.91	159	250	7.52	34.06	1.57	26.63	142	0.54
206	8.14	34.10	1.60	148	300	7.10	34.12	1.03	26.74	132	0.62
236	7.64	34.05	1.68	145	400	6.51	34.21	0.56	26.89	117	0.74
276	7.36	34.11	-	136	500	6.07	34.26	0.32	26.98	108	0.86
336	6.76	34.14	0.74	126							
411	6.49	34.23	0.51	116							
485	6.16	34.25	0.34	110							
565	5.63	34.30	0.27	100							

ORCA; October 11, 1959; 1310 GCT; 30°50'N, 119°55'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 04°. 97.70

1	18.41	33.49	5.06	388	0	(18.41)	(33.49)	(5.06)	(24.04)	(388)	(0.00)
11	18.46	33.51	5.17	388	10	18.46	33.51	5.16	24.04	388	0.04
31	18.43	33.56	5.16	384	20	18.44	33.54	5.17	24.06	386	0.08
41	18.42	33.57	5.10	383	30	18.43	33.56	5.16	24.08	384	0.12
51	17.10	33.37	5.46	367	50	17.30	33.39	5.40	24.23	370	0.19
66	14.45	33.31	5.73	315	75	14.16	33.33	5.66	24.89	307	0.28
81	12.74	33.34	5.19	280	100	11.14	33.49	4.55	25.59	240	0.35
100	11.14	33.49	4.55	240	125	9.67	33.64	3.74	25.96	205	0.40
125	9.67	33.64	3.74	205	150	9.17	33.80	2.90	26.17	185	0.45
144	9.24	33.77	2.98	189	200	8.43	34.03	1.88	26.47	157	0.54
174	8.88	33.88	2.65	175	250	8.00	34.15	1.47	26.63	142	0.62
204	8.40	34.04	1.82	156	300	7.59	34.24	0.97	26.75	130	0.69
233	8.18	34.09	1.64	149	400	6.69	34.26	0.47	26.90	116	0.81
273	7.79	34.22	1.13	134	500	6.15	34.30	0.33	27.00	107	0.93
332	7.32	34.25	0.74	125							
407	6.64	34.26	0.46	116							
481	6.22	34.29	0.36	108							
561	5.94	34.33	0.28	102							

a) Alternate value, 18.21°C, not used in interpolation.

SIO

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5910

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

97.80 ORCA; October 11, 1959; 0755 GCT; 30°33'N, 120°31'W; sounding, 2000+ fm; wind, 310°, force 1; weather, overcast; sea, moderate; wire angle, 01°.

1	18.54	33.39	4.99	399	0	(18.54)	(33.39)	(4.99)	(23.93)	(399)	(0.00)
11	18.35	33.57	5.16	381	10	18.36	33.57	5.15	24.11	382	0.04
31	18.32	33.56	5.19	382	20	18.33	33.57	5.19	24.11	382	0.08
41	17.02	33.35	5.44	367	30	18.32	33.56	5.19	24.11	382	0.12
57	14.68	33.12	5.81	334	50	15.30	33.15	5.73	24.50	344	0.19
72	13.88	33.18	5.75	313	75	13.53	33.19	5.72	24.87	309	0.27
96	12.50	33.30	5.19	278	100	12.38	33.33	5.13	25.24	274	0.34
116	11.81	33.51	4.90	250	125	10.80	33.56	4.57	25.71	229	0.41
136	10.08	33.60	4.30	214	150	9.63	33.65	4.07	25.98	203	0.46
156	9.48	33.68	4.01	199	200	8.62	33.88	3.63	26.32	171	0.56
186	8.86	33.84	3.79	177	250	7.83	33.96	2.97	26.50	154	0.64
221	8.29	33.93	3.37	163	300	7.21	34.02	2.08	26.64	141	0.72
251	7.82	33.96	2.96	154	400	6.55	34.13	0.99	26.83	123	0.86
300	7.21	34.02	2.08	141	500	6.02	34.26	0.40	26.98	108	0.98
355	6.77	34.05	1.45	133	600	5.40	34.32	0.31	27.11	96	1.08
440	6.38	34.22	0.60	115							
525	5.86	34.27	0.35	105							
610	5.36	34.32	0.30	95							

97.90 ORCA; October 11, 1959; 0227 GCT; 30°16'N, 121°11'W; sounding, 2000+ fm; wind, 310°, force 2; weather, overcast; sea, moderate; wire angle, 04°.

1	18.98	33.34	5.13	413	0	(18.98)	(33.34)	(5.13)	(23.78)	(413)	(0.00)
11	18.98	33.34	5.27	413	10	18.98	33.34	5.26	23.78	413	0.04
31	18.96	33.32	5.23	414	20	18.97	33.33	5.26	23.78	413	0.08
61	16.82	33.53	5.75	349	30	18.96	33.32	5.23	23.77	414	0.12
71	16.16	33.57	5.64	332	50	18.94	33.32	5.23	23.77	414	0.21
86	15.24	33.48	5.52	319	75	16.03	33.57	5.63	24.66	329	0.30
101	14.66	33.60	5.54	298	100	14.67	33.59	5.54	24.98	299	0.38
116	13.94	33.64	5.40	280	125	13.30	33.62	5.28	25.30	269	0.45
141	12.00	33.60	4.98	247	150	11.43	33.60	4.79	25.63	237	0.52
162	10.60	33.62	4.56	221	200	9.02	33.83	3.81	26.22	181	0.62
190	9.21	33.78	4.09	187	250	8.12	33.96	2.91	26.46	158	0.71
221	8.65	33.89	3.45	171	300	7.53	34.02	2.11	26.60	145	0.79
250	8.12	33.96	2.91	158	400	6.53	34.12	1.11	26.82	124	0.93
299	7.54	34.02	2.12	145	500	5.85	34.22	0.53	26.98	109	1.05
354	6.92	34.08	1.55	132	600	5.32	34.30	0.30	27.11	96	1.16
438	6.24	34.16	0.84	118							
524	5.70	34.24	0.44	106							
608	5.31	34.31	0.29	96							

100.30 ORCA; October 12, 1959; 2030 GCT; 31°41'N, 116°47'W; sounding, 238 fm; wind, 270°, force 2; weather, fog; sea, moderate; wire angle, 07°.

1	19.96	33.72	5.05	409	0	(19.96)	(33.72)	(5.05)	(23.82)	(409)	(0.00)
11	19.80	33.68	5.25	408	10	19.82	33.68	5.24	23.83	408	0.04
31	15.13	33.39	5.78	323	20	18.00	33.54	5.53	24.17	375	0.08
51	13.96	33.40	5.31	298	30	15.27	33.39	5.77	24.70	325	0.12
76	12.96	33.49	4.71	272	50	14.02	33.41	5.33	24.98	299	0.18
100	12.14	33.56	4.05	252	75	12.99	33.48	4.75	25.25	273	0.25
125	11.02	33.66	3.47	225	100	12.14	33.56	4.05	25.47	252	0.32
164	9.76	33.86	2.60	190	125	11.02	33.66	3.47	25.75	225	0.38
203	9.44	34.00	2.05	175	150	10.08	33.80	2.90	26.02	200	0.43
252	8.87	34.14	1.58	155	200	9.48	33.99	2.12	26.27	176	0.53
302	8.22	34.20	1.25	142	250	8.90	34.13	1.59	26.48	156	0.61
406	7.42	34.23	0.64	128	300	8.24	34.20	1.26	26.63	142	0.69
					400	7.48	34.23	0.70	26.76	129	0.83

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10 cm/g	ΔD dyn. m
ORCA; October 14, 1959; 0212 GCT; 31°21'N, 117°27'W; sounding, 1000+ fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 13°.											100.40
1	19.63	33.59	4.80	411	0	(19.63)	(33.59)	(4.80)	(23.80)	(411)	(0.00)
11	19.66	33.57	4.78	413	10	19.66	33.57	4.78	23.78	413	0.04
30	19.46	33.57	4.91	408	20	19.59	33.57	4.83	23.80	411	0.08
39	18.16	33.46	5.20	385	30	19.46	33.57	4.91	23.83	408	0.12
54	15.60	33.22	5.52	345	50	16.60	33.30	5.47	24.32	361	0.20
69	14.91	33.25	5.45	329	75	14.57	33.30	5.41	24.78	318	0.29
93	13.70	33.41	5.13	293	100	13.27	33.42	4.92	25.14	283	0.36
112	12.48	33.46	4.54	266	125	11.70	33.52	4.22	25.52	248	0.43
131	11.40	33.54	4.14	241	150	10.32	33.60	3.92	25.82	218	0.49
150	10.32	33.60	3.92	218	200	8.77	33.88	2.89	26.30	173	0.59
178	9.18	33.75	3.45	189	250	7.98	34.03	2.10	26.54	150	0.67
212	8.56	33.93	2.62	166	300	7.52	34.06	1.71	26.63	142	0.75
241	8.06	34.02	2.22	152	400	6.59	34.16	1.03	26.84	122	0.84
289	7.64	34.05	1.81	145	500	6.03	34.24	0.46	26.97	110	1.01
342	7.00	34.12	1.37	131	600	(5.52)	(34.34)	(0.31)	(27.12)	(95)	(1.12)
424	6.44	34.18	0.90	119							
507	6.00	34.25	0.42	108							
591	5.56	34.33	0.31	97							
ORCA; October 14, 1959; 0831 GCT; 31°00'N, 118°07'W; sounding, 2000 fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 11°.											100.50
1	20.50a)	33.78	5.20	419	0	(20.50)	(33.78)	(5.20)	(23.72)	(419)	(0.00)
11	20.52	33.80	5.28	417	10	20.52	33.80	5.27	23.74	417	0.04
30	20.51	33.80	5.14	417	20	20.52	33.80	5.20	23.74	417	0.08
40	19.03b)	33.62	5.30	394	30	20.51	33.80	5.14	23.74	417	0.13
55	16.45	33.52	5.67	342	50	17.50	33.53	5.58	24.29	364	0.20
70	15.36	33.57	5.40	314	75	14.67	33.56	5.31	24.96	301	0.29
95	12.86	33.53	5.08	268	100	12.60	33.53	4.96	25.36	263	0.36
114	11.68	33.53	4.59	246	125	10.90	33.58	4.23	25.71	229	0.42
133	10.52	33.68	3.92	216	150	10.19	33.72	3.71	25.94	207	0.48
152	10.12	33.72	3.69	206	200	9.03	33.98	2.52	26.34	169	0.57
181	9.36	33.91	2.86	180	250	8.24	34.02	2.32	26.49	155	0.66
215	8.78	34.02	2.41	163	300	7.75	34.12	1.78	26.64	141	0.73
245	8.30	34.02	2.34	156	400	6.80	34.22	0.82	26.86	120	0.87
294	7.78	34.09	1.88	143	500	5.92	34.24	0.52	26.98	108	0.99
347	7.61	34.23	1.02	131	600	(5.36)	(34.34)	(0.33)	(27.13)	(94)	(1.10)
431	6.38	34.22	0.74	115							
515	5.84	34.25	0.49	107							
599	5.37	34.34	0.33	94							
ORCA; October 14, 1959; 1412 GCT; 30°40'N, 118°45'W; sounding, 1500 fm; wind, 310°, force 2; weather, overcast; sea, rough; wire angle, 02°.											100.60
1	18.84	33.42	4.98	404	0	(18.84)	(33.42)	(4.98)	(23.87)	(404)	(0.00)
11	18.82	33.43	5.04	403	10	18.83	33.43	5.03	23.88	403	0.04
31	18.70	33.46	5.05	398	20	18.78	33.45	5.04	23.91	401	0.08
41	17.00	33.35	5.62	366	30	18.71	33.46	5.05	23.94	398	0.12
56	16.14	33.43	5.64	341	50	16.61	33.42	5.63	24.42	352	0.20
71	15.02	33.48	5.60	315	75	14.92	33.49	5.56	24.85	311	0.28
96	13.26	33.51	5.05	277	100	12.96	33.49	4.92	25.26	272	0.35
115	12.06	33.47	4.55	258	125	11.18	33.49	4.45	25.59	240	0.42
135	10.44	33.53	4.34	225	150	9.64	33.69	4.12	26.01	201	0.47
155	9.46	33.72	4.03	195	200	8.59	33.87	3.15	26.32	171	0.57
184	8.78	33.82	3.51	178	250	7.89	34.00	2.17	26.52	152	0.65
219	8.39	33.92	2.78	164	300	7.29	34.10	1.65	26.69	136	0.73
249	7.90	34.00	2.18	152	400	6.62	34.22	0.74	26.88	118	0.86
299	7.30	34.10	1.66	136	500	6.09	34.30	0.37	27.01	106	0.98
353	6.90	34.18	1.09	125	600	5.52	34.34	0.26	27.11	96	1.08
438	6.41	34.25	0.53	113							
523	5.94	34.31	0.32	103							
608	5.48	34.34	0.25	96							

a) See footnote, page 421.
b) Alternate value, 17.63°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T,S,P}^{-5}$ 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T,S,P}^{-5}$ 10^3 cm/g	ΔD dyn. m
100.70	ORCA; October 14, 1959; 1939 GCT; 30°18.5'N, 119°28.5'W; sounding, 2000+ fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 17°.										
1	18.70	33.47	5.20	397	0	(18.70)	(33.47)	(5.20)	(23.95)	(397)	(0.00)
10	18.65	33.47	5.13	396	10	18.65	33.47	5.13	23.96	396	0.04
29	18.58	33.56	5.17	387	20	18.61	33.53	5.14	24.02	390	0.08
39	18.39a)	33.52	5.33	386	30	18.57	33.56	5.18	24.05	387	0.12
53	15.40	33.16	5.82	345	50	16.50	33.24	5.65	24.30	363	0.19
67	14.34	33.19	5.96	321	75	14.02	33.23	5.86	24.84	312	0.28
90	13.15	33.36	5.45	286	100	12.61	33.40	5.21	25.25	273	0.35
109	12.12	33.43	5.03	262	125	10.97	33.50	4.70	25.64	236	0.42
127	10.88	33.51	4.65	234	150	10.11	33.56	4.05	25.83	218	0.47
146	10.28	33.54	4.14	222	200	8.95	33.91	2.38	26.29	174	0.57
174	9.33	33.76	3.37	191	250	8.02	33.99	2.43	26.50	154	0.66
206	8.84	34.93	2.29	171	300	7.29	34.06	1.79	26.66	139	0.73
234	8.24	33.96	2.59	160	400	6.49	34.14	0.94	26.84	122	0.87
281	7.54	34.04	2.02	144	500	5.91	34.21	0.50	26.96	110	0.99
333	6.96	34.09	1.48	132							
414	6.40	34.15	0.85	120							
496	5.92	34.21	0.51	110							
579	5.55	34.31	0.36	98							
100.80	ORCA; October 15, 1959; 0034 GCT; 29°57'N, 120°06'W; sounding, 2000+ fm; wind, 280°, force 3; weather, overcast; sea, rough; wire angle, 15°.										
1	18.78	33.48	5.15	398	0	(18.78)	(33.48)	(5.15)	(23.94)	(398)	(0.00)
11	18.78	33.48	5.18	398	10	18.78	33.48	5.17	23.94	398	0.04
30	18.68	33.48	5.21	396	20	18.77	33.48	5.18	23.94	398	0.08
39	18.5	33.48	5.28	391	30	18.68	33.48	5.21	23.96	396	0.12
54	15.88	33.16	5.89	356	50	17.18	33.34	5.61	24.23	370	0.20
68	14.23	33.03	5.92	331	75	13.98	33.05	5.85	24.71	324	0.28
91	13.42	33.16	5.60	306	100	13.40	33.27	5.49	25.00	297	0.36
109	12.74	33.33	5.27	280	125	11.87	33.46	4.94	25.44	255	0.43
128	11.68	33.48	4.85	250	150	10.29	33.54	4.34	25.79	222	0.49
146	10.56	33.53	4.44	227	200	8.60	33.86	3.31	26.31	172	0.59
175	9.07	33.73	3.61	189	250	7.79	33.97	2.50	26.52	152	0.68
207	8.48	33.89	3.23	168	300	7.25	34.06	1.56	26.67	138	0.75
235	8.08	33.95	2.84	158	400	6.69	34.17	0.76	26.84	122	0.89
282	7.37	34.02	1.87	143	500	6.17	34.23	0.46	26.95	111	1.01
334	7.07	34.13	1.16	131	600	(5.37)	(34.30)		(27.10)	(97)	(1.12)
416	6.60	34.18	0.70	121							
499	6.18	34.23	0.47	112							
583	5.48	34.29	0.34	100							
100.90	ORCA; October 15, 1959; 0545 GCT; 29°36.5'N, 120°44'W; sounding, 2000+ fm; wind, 280°, force 3; weather, overcast; sea, rough; wire angle, 13°.										
1	19.12	33.38	5.13	413	0	(19.12)	(33.38)	(5.13)	(23.78)	(413)	(0.00)
11	19.14	33.37	5.13	415	10	19.13	33.37	5.13	23.76	415	0.04
30	19.10	33.39	5.22	412	20	19.13	33.38	5.21	23.77	414	0.08
40	19.06	33.41	5.15	410	30	19.10	33.39	5.22	23.79	412	0.12
54	17.86	33.61	5.54	367	50	17.99	33.60	5.52	24.23	370	0.20
69	16.56	33.64	5.64	335	75	15.80	33.57	5.60	24.72	324	0.29
92	15.14	33.55	5.54	311	100	14.94	33.55	5.52	24.89	308	0.37
111	14.10	33.60	5.32	286	125	13.65	33.67	5.14	25.25	273	0.44
130	13.48	33.68	5.09	269	150	11.94	33.62	4.83	25.55	244	0.51
150	11.94	33.62	4.83	244	200	9.22	33.79	3.95	26.16	187	0.62
178	9.69	33.68	4.31	202	250	8.13	33.94	2.83	26.44	159	0.71
211	8.97	33.84	3.70	179	300	7.34	34.01	2.13	26.62	143	0.79
240	8.30	33.92	3.00	163	400	6.29	34.12	1.08	26.85	121	0.92
287	7.54	34.00	2.26	147	500	5.60	34.20	0.56	27.00	107	1.04
340	6.78	34.06	1.66	132	600	(5.09)	(34.30)		(27.13)	(94)	(1.15)
422	6.13	34.14	0.91	118							
505	5.58	34.21	0.53	106							
588	5.13	34.29	0.40	95							

a) Alternate value, 16.89°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m
ORCA; October 21, 1959; 1430 GCT;[a] 30°48'N, 118°08'W; sounding, 700 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 12°.											101.50
1	19.83	33.75	5.02	404	0	(19.83)	(33.75)	(5.02)	(23.88)	(404)	(0.00)
11	19.83	33.77	5.05	403	10	19.83	33.77	5.04	23.89	403	0.04
31	19.82	33.75	4.97	404	20	19.83	33.76	5.01	23.89	403	0.08
40	17.04	33.58	5.47	350	30	19.82	33.75	4.98	23.88	404	0.12
55	14.02	33.57	4.60	287	50	14.74	33.57	4.71	24.94	302	0.19
69	13.10	33.58	4.59	269	75	12.85	33.58	4.50	25.35	264	0.26
93	11.67	33.58	4.12	243	100	11.25	33.59	4.07	25.65	235	0.33
112	10.36	33.66	3.79	214	125	10.01	33.71	3.56	25.96	205	0.38
131	9.92	33.74	3.46	201	150	9.74	33.78	3.28	26.07	195	0.43
150	9.74	33.78	3.28	195	200	8.76	33.94	2.67	26.35	168	0.52
179	9.38	33.88	2.91	182	250	8.00	34.02	2.23	26.52	152	0.61
212	8.48	33.96	2.57	163	300	7.52	34.10	1.84	26.66	139	0.68
241	8.10	34.00	2.30	155	400	6.88	34.23	0.80	26.86	120	0.82
289	7.61	34.09	1.97	141	500	6.37	34.36	0.32	27.02	105	0.94
342	7.20	34.16	1.23	130	600	(5.73)	(34.38)	(0.27)	(27.12)	(95)	(1.04)
424	6.76	34.27	0.63	116							
507	6.32	34.36	0.30	104							
592	5.79	34.38	0.27	96							
ORCA; October 16, 1959; 2134 GCT; 31°01'N, 116°26'W; sounding, 41 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 03°.											103.30
1	18.91	33.61	5.45	392	0	(18.91)	(33.61)	(5.45)	(24.00)	(392)	(0.00)
11	17.16	33.51	5.68	358	10	17.40	33.52	5.64	24.30	363	0.04
31	14.98	33.46	5.75	315	20	16.20	33.47	5.73	24.56	339	0.07
51	14.18	33.56	4.96	291	30	15.00	33.46	5.75	24.81	315	0.11
					50	14.19	33.56	5.00	25.05	292	0.17
ORCA; October 16, 1959; 1740 GCT; 30°51'N, 116°46'W; sounding, 900 fm; wind, 310°, force 2; weather, overcast; sea, moderate; wire angle, 05°.											103.35
1	20.03	33.68	5.01	414	0	(20.03)	(33.68)	(5.01)	(23.77)	(414)	(0.00)
11	20.04	33.68	5.14	415	10	20.04	33.68	5.14	23.76	415	0.04
31	16.46	33.30	5.82	358	20	19.50	33.61	5.25	23.85	406	0.08
41	15.21	33.31	5.89	330	30	16.68	33.31	5.80	24.31	362	0.12
56	14.22	33.47	5.54	298	50	14.67	33.41	5.77	24.84	312	0.19
71	13.38	33.53	4.98	278	75	13.24	33.54	4.87	25.24	274	0.26
96	12.10	33.62	4.11	247	100	12.00	33.64	4.03	25.55	244	0.33
115	11.50	33.68	3.61	232	125	11.45	33.75	3.08	25.74	226	0.39
136	11.45	33.83	2.63	220	150	11.27	33.88	2.48	25.88	213	0.44
156	11.13	33.89	2.43	210	200	9.38	33.94	2.70	26.25	178	0.54
185	9.85	33.91	2.79	188	250	8.91	34.15	1.76	26.50	154	0.63
219	8.96	34.00	2.46	167	300	8.42	34.21	1.48	26.61	144	0.71
249	8.92	34.15	1.76	154	400	7.38	34.25	0.88	26.80	125	0.84
299	8.42	34.21	1.49	144	500	6.68	34.32	0.49	26.95	112	0.97
353	7.96	34.23	1.12	135	600	5.90	34.35	0.32	27.07	100	1.08
438	6.99	34.29	0.65	118							
522	6.54	34.32	0.44	110							
607	5.84	34.35	0.31	99							

a) Upon completion of the scheduled station pattern, the RV Orca was directed to proceed to Station 101.50 (30°48'N, 118°08'W) to make a hydrographic cast in order to add to the description of oceanographic conditions at the center of the counterclockwise eddy which had been indicated by drogue measurements of the RV Horizon. A comparison of the data obtained at this station with those of Station 100.50 (occupied October 14) shows considerable differences between the property curves but very similar values of δ_T.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
103.40	ORCA; October 16, 1959; 1442 GCT; 30°42'N, 117°05'W; sounding, 900 fm; wind, 310°, force 2; weather, overcast; sea, moderate; wire angle, 08°.										
1	19.91	33.64	5.00	414	0	(19.91)	(33.64)	(5.00)	(23.77)	(414)	(0.00)
11	19.92	33.66	5.23	413	10	19.92	33.66	5.23	23.78	413	0.04
31	19.18	33.59	5.29	400	20	19.89	33.66	5.25	23.79	412	0.08
41	17.43	33.38	5.83	374	30	19.27	33.60	5.29	23.91	401	0.12
56	14.68	33.35	5.52	317	50	14.88	33.33	5.57	24.74	322	0.20
70	14.18	33.52	5.28	294	75	14.09	33.52	5.26	25.05	292	0.27
95	12.40	33.57	4.76	257	100	12.09	33.58	4.53	25.49	250	0.34
114	11.30	33.64	4.04	232	125	11.01	33.67	4.00	25.76	224	0.40
134	10.72	33.69	3.96	218	150	10.22	33.77	3.57	25.97	204	0.46
153	10.08	33.78	3.50	201	200	8.95	33.93	2.67	26.31	172	0.55
183	9.15	33.87	3.04	180	250	8.73	34.15	1.84	26.51	153	0.64
217	8.83	34.00	2.34	165	300	8.30	34.23	1.15	26.64	141	0.71
247	8.74	34.14	1.86	154	400	7.36	34.29	0.67	26.84	122	0.85
296	8.34	34.23	1.16	141	500	6.48	34.33	0.47	26.98	108	0.97
350	7.64	34.25	0.95	130	600	5.69	34.35	0.27	27.10	97	1.08
434	7.10	34.32	0.52	117							
519	6.30	34.33	0.47	106							
604	5.66	34.35	0.26	97							
103.50	ORCA; October 16, 1959; 0835 GCT; 30°23'N, 117°44'W; sounding, 1000 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 14°.										
1	20.92	33.84	4.78	425	0	(20.92)	(33.84)	(4.78)	(23.65)	(425)	(0.00)
11	20.96	33.84	4.86	426	10	20.96	33.84	4.85	23.65	426	0.04
30	20.82	33.84	4.89	422	20	20.93	33.84	4.87	23.65	425	0.08
40	19.1	33.68	5.27	391	30	20.82	33.84	4.89	23.68	422	0.13
54	17.06	33.66	5.32	345	50	17.42	33.67	5.33	24.42	352	0.20
69	15.78	33.60	5.31	322	75	14.90	33.60	5.26	24.94	303	0.29
92	14.08	33.58	5.09	288	100	13.35	33.55	4.82	25.22	276	0.36
111	12.52	33.53	4.44	262	125	11.78	33.63	3.95	25.58	241	0.42
130	11.51	33.68	3.82	233	150	10.51	33.68	3.67	25.86	215	0.48
150	10.51	33.68	3.67	215	200	9.28	33.90	2.63	26.23	180	0.58
179	9.76	33.81	2.83	194	250	8.41	34.06	1.95	26.50	154	0.67
212	9.02	33.95	2.44	172	300	7.75	34.10	1.75	26.63	142	0.75
241	8.54	34.05	1.99	157	400	6.56	34.15	0.82	26.84	122	0.88
289	7.90	34.09	1.82	145	500	6.16	34.25	0.41	26.97	110	1.01
342	7.03	34.12	1.31	131	600	(5.60)	(34.35)	(0.23)	(27.11)	(96)	(1.12)
424	6.42	34.17	0.70	119							
507	6.12	34.26	0.38	109							
591	5.66	34.34	0.23	98							
103.60	ORCA; October 16, 1959; 0310 GCT; 30°04'N, 118°22'W; sounding, 1900 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 15°.										
1	19.30	33.46	5.12	412	0	(19.30)	(33.46)	(5.12)	(23.79)	(412)	(0.00)
11	19.30	33.48	5.13	411	10	19.30	33.48	5.13	23.80	411	0.04
30	19.13	33.49	5.19	406	20	19.26	33.49	5.17	23.82	409	0.08
39	18.99	33.50	5.15	402	30	19.13	33.49	5.19	23.85	406	0.12
54	17.44	33.42	5.52	371	50	18.02	33.44	5.37	24.10	383	0.20
68	16.29	33.42	5.69	346	75	15.69	33.45	5.64	24.66	330	0.29
92	15.12	33.49	5.57	316	100	14.95	33.50	5.51	24.85	311	0.37
110	14.28	33.51	5.31	297	125	12.64	33.44	5.02	25.27	271	0.45
129	12.24	33.44	4.92	263	150	10.50	33.59	4.36	25.79	222	0.51
148	10.63	33.58	4.39	225	200	8.85	33.83	3.20	26.25	178	0.61
176	9.14	33.73	3.89	190	250	8.09	34.03	2.21	26.52	152	0.70
209	8.76	33.87	2.92	174	300	7.34	34.06	1.76	26.66	139	0.77
237	8.30	34.02	2.31	156	400	6.54	34.16	0.91	26.85	121	0.91
284	7.54	34.05	1.92	143	500	6.06	34.29	0.42	27.01	106	1.03
336	6.94	34.11	1.31	131	600	(5.59)	(34.34)		(27.11)	(96)	(1.13)
418	6.44	34.18	0.81	119							
500	6.06	34.29	0.42	106							
584	5.66	34.34	0.31	97							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

ORCA; October 15, 1959; 2156 GCT; 29°48'N, 119°05'W; sounding, 2000 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 11°. 103.70

1	19.37	33.40	4.98	418	0	(19.37)	(33.40)	(4.98)	(23.73)	(418)	(0.00)
11	19.09	33.44	5.07	409	10	19.09	33.44	5.07	23.82	409	0.04
31	19.10	33.44	4.90	409	20	19.09	33.44	5.00	23.82	409	0.08
40	19.13	33.53	5.10	403	30	19.09	33.44	4.91	23.82	409	0.12
54	17.64	33.66	5.40	358	50	17.90	33.66	5.37	24.29	364	0.20
69	16.88	33.60	5.47	346	75	16.40	33.64	5.45	24.63	332	0.29
93	15.72	33.68	5.35	314	100	15.40	33.68	5.30	24.89	307	0.37
112	14.72	33.69	5.13	293	125	13.71	33.69	4.96	25.26	272	0.44
132	12.94	33.68	4.84	258	150	11.33	33.62	4.58	25.66	234	0.51
151	11.28	33.62	4.57	233	200	9.10	33.78	3.76	26.17	186	0.61
181	9.66	33.71	4.10	200	250	8.14	33.96	2.70	26.46	158	0.70
215	8.76	33.84	3.44	176	300	7.42	34.06	1.88	26.64	141	0.78
244	8.24	33.95	2.83	160	400	6.50	34.20	0.86	26.88	118	0.92
291	7.54	34.04	1.95	144	500	6.03	34.28	0.42	27.01	106	1.03
345	6.94	34.12	1.43	130	600	(5.52)	(34.34)	(0.30)	(27.12)	(95)	(1.14)
429	6.34	34.23	0.68	114							
513	5.98	34.29	0.39	105							
597	5.54	34.34	0.30	96							

ORCA; October 15, 1959; 1621 GCT; 29°22'N, 119°44'W; sounding, 1900 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 07°. 103.80

1	20.50	34.08	4.93	397	0	(20.50)	(34.08)	(4.93)	(23.95)	(397)	(0.00)
11	20.48	34.05	4.90	399	10	20.49	34.05	4.90	23.93	399	0.04
31	20.48	34.05	4.89	399	20	20.48	34.05	4.90	23.93	399	0.08
61	20.35	34.05	4.90	395	30	20.48	34.05	4.89	23.93	399	0.12
70	19.70	33.96	5.01	386	50	20.42	34.05	4.89	23.95	397	0.20
85	17.18	33.73	5.34	342	75	18.93	33.87	5.18	24.19	374	0.30
99	16.16	33.73	-	320	100	16.11	33.73	5.11	24.77	319	0.38
114	14.32	33.68	4.67	285	125	12.78	33.69	4.17	25.45	254	0.46
139	11.65	33.71	3.85	233	150	11.24	33.72	3.78	25.76	225	0.52
159	10.84	33.73	3.71	217	200	9.81	33.88	2.90	26.13	190	0.62
188	10.00	33.81	3.24	197	250	9.15	34.15	1.56	26.45	159	0.71
218	9.56	34.03	2.17	174	300	8.65	34.26	1.08	26.62	143	0.79
247	9.19	34.14	1.61	160	400	7.40	34.31	0.52	26.84	122	0.93
296	8.69	34.25	1.12	145	500	6.52	34.34	0.23	26.98	108	1.05
351	8.05	34.31	0.71	131	600	5.73	34.34	0.24	27.08	99	1.16
434	7.02	34.31	0.41	117							
518	6.38	34.34	0.21	106							
603	5.71	34.34	0.24	98							

ORCA; October 15, 1959; 1149 GCT; 29°02.5'N, 120°18'W; sounding, 2000+ fm; wind, 300°, force 3; weather, cloudy; sea, rough; wire angle, 10°. 103.90

2	21.08	34.04	4.74	415	0	(21.08)	(34.04)	(4.74)	(23.76)	(415)	(0.00)
12	21.08	34.04	4.86	415	10	21.08	34.04	4.84	23.76	415	0.04
32	21.07	34.05	4.90	414	20	21.07	34.04	4.89	23.77	414	0.08
41	21.07	34.05	4.84	414	30	21.07	34.05	4.90	23.77	414	0.12
56	21.05	34.05	4.92	413	50	21.06	34.05	4.89	23.77	414	0.21
71	17.09	33.68	5.38	344	75	15.89	33.64	5.11	24.76	320	0.30
96	13.06	33.63	4.14	264	100	12.62	33.65	3.95	25.44	255	0.37
115	11.58	33.69	3.55	233	125	11.03	33.71	3.38	25.78	222	0.43
135	10.66	33.74	3.23	214	150	10.33	33.78	3.00	25.96	205	0.49
156	10.21	33.81	2.92	201	200	8.96	33.95	2.51	26.32	171	0.58
185	9.20	33.89	2.86	179	250	7.83	34.01	2.17	26.55	150	0.66
220	8.62	34.02	2.17	161	300	7.70	34.14	1.37	26.67	138	0.74
249	7.84	34.01	2.18	150	400	7.17	34.28	0.50	26.85	121	0.88
299	7.70	34.14	1.38	138	500	6.39	34.32	0.30	26.99	108	0.99
353	7.73	34.28	0.60	128	600	5.68	34.37	0.19	27.12	96	1.10
437	6.80	34.30	0.42	115							
522	6.22	34.33	0.26	105							
607	5.63	34.38	0.19	94							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
107.32	ORCA; October 17, 1959; 0156 GCT; 30°26'N, 116°12'W; sounding, 300 fm; wind, 300°, force 2; weather, partly cloudy; sea, rough; wire angle, 17°.										
1	19.79	33.65	5.02	410	0	(19.79)	(33.65)	(5.02)	(23.81)	(410)	(0.00)
10	19.80	33.66	5.10	410	10	19.80	33.66	5.10	23.81	410	0.04
29	17.80	33.44	5.46	378	20	18.98	33.56	5.33	23.95	397	0.08
49	15.20	33.44	5.56	320	30	17.76	33.44	5.47	24.16	377	0.12
72	12.92	33.55	4.71	268	50	15.13	33.44	5.55	24.77	319	0.19
95	11.86	33.64	3.90	241	75	12.50	33.57	4.49	25.40	258	0.26
118	12.00	33.94	2.32	222	100	11.61	33.65	3.51	25.64	236	0.32
155	10.88	34.00	1.95	198	125	11.95	33.98	2.20	25.82	218	0.38
193	10.13	34.04	1.96	183	150	11.02	34.00	1.95	26.01	201	0.44
241	9.50	34.22	1.36	159	200	10.03	34.06	1.90	26.23	180	0.53
289	8.76	34.29	1.03	143	250	9.35	34.24	1.28	26.49	155	0.62
391	7.44	34.31	0.51	123	300	8.62	34.30	0.97	26.65	140	0.69
					400	(7.35)	(34.31)	(0.49)	(26.85)	(121)	(0.83)
107.35	ORCA; October 17, 1959; 0401 GCT; 30°20'N, 116°23'W; sounding, 1000 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 20°.										
1	19.90	33.68	5.03	411	0	(19.90)	(33.68)	(5.03)	(23.80)	(411)	(0.00)
10	19.92	33.66	5.16	412	10	19.92	33.66	5.16	23.78	412	0.04
29	17.88	33.49	5.59	376	20	19.84	33.65	5.19	23.79	412	0.08
38	16.65	33.49	5.75	348	30	17.77	33.49	5.61	24.19	374	0.12
53	15.20	33.46	5.64	319	50	15.78	33.47	5.71	24.65	330	0.19
66	14.40	33.57	5.16	295	75	14.09	33.60	4.92	25.10	287	0.27
89	12.90	33.64	4.20	260	100	11.60	33.63	3.80	25.62	238	0.34
108	11.42	33.64	3.64	234	125	11.23	33.68	3.36	25.72	228	0.40
126	11.22	33.68	3.32	228	150	10.44	33.74	3.15	25.91	210	0.45
145	10.62	33.72	3.16	214	200	9.17	33.94	2.61	26.28	175	0.55
172	9.77	33.86	3.06	190	250	8.22	34.05	2.05	26.52	153	0.63
204	9.08	33.95	2.57	173	300	8.01	34.17	1.37	26.64	141	0.71
232	8.34	34.00	2.25	158	400	7.47	34.28	0.69	26.81	125	0.85
278	8.14	34.13	1.67	145	500	6.52	34.27	0.42	26.93	113	0.97
330	7.88	34.21	1.05	136							
411	7.38	34.29	0.62	123							
493	6.60	34.27	0.44	114							
576	5.90	34.32	0.30	102							
107.40	ORCA; October 17, 1959; 0705 GCT; 30°11'N, 116°43.5'W; sounding, 1800 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 15°.										
1	20.86	33.84	4.98	424	0	(20.86)	(33.84)	(4.98)	(23.67)	(424)	(0.00)
11	20.87	33.86	4.94	422	10	20.86	33.86	4.95	23.68	422	0.04
30	18.40	33.63	5.54	378	20	20.83	33.86	4.95	23.70	421	0.08
40	17.50	33.58	5.54	361	30	18.40	33.63	5.54	24.14	378	0.12
54	16.10	33.59	5.43	329	50	16.62	33.58	5.50	24.54	341	0.20
69	15.30	33.60	5.07	311	75	14.66	33.60	4.69	24.99	298	0.28
93	12.77	33.58	3.63	262	100	12.62	33.65	3.31	25.44	254	0.35
112	12.44	33.77	2.89	243	125	12.23	33.84	2.59	25.66	234	0.41
131	12.12	33.86	2.45	230	150	11.40	33.89	2.13	25.86	215	0.46
150	11.40	33.89	2.13	215	200	10.22	33.98	2.55	26.13	189	0.57
179	11.01	33.98	2.33	202	250	9.18	34.11	1.91	26.42	162	0.66
213	9.76	33.98	2.60	181	300	8.61	34.22	1.50	26.59	146	0.74
242	9.28	34.09	1.99	166	400	7.22	34.22	1.00	26.80	126	0.88
290	8.72	34.21	1.55	148	500	6.62	34.33	0.46	26.96	110	1.00
343	8.10	34.21	1.30	139	600	(5.80)	(34.33)	(0.36)	(27.07)	(101)	(1.12)
425	6.90	34.23	0.87	121							
508	6.59	34.33	0.42	110							
592	5.88	34.33	0.36	101							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

ORCA; October 17, 1959; 1240 GCT; 29°52'N, 117°22.5'W; sounding, 2000+ fm; wind, 300°, force 3; weather, cloudy; sea, rough; wire angle, 09°. 107.50

1	21.22	33.91	5.02	428	0	(21.22)	(33.91)	(5.02)	(23.62)	(428)	(0.00)
11	21.24	33.91	5.00	428	10	21.24	33.91	5.00	23.62	428	0.04
31	17.64	33.63	5.40	361	20	21.24	33.91	5.00	23.62	428	0.09
41	16.05	33.55	5.51	331	30	18.29	33.67	5.36	24.20	372	0.13
56	14.76	33.55	5.24	303	50	15.50	33.55	5.43	24.78	319	0.19
70	13.35	33.53	4.87	277	75	13.10	33.53	4.80	25.26	272	0.27
95	11.15	33.63	4.41	230	100	11.06	33.64	4.40	25.72	228	0.33
115	10.54	33.66	4.32	218	125	10.16	33.70	3.94	25.93	208	0.39
134	9.96	33.77	3.51	200	150	9.71	33.90	2.98	26.16	187	0.44
154	9.66	33.92	2.88	184	200	9.18	34.08	2.20	26.39	165	0.53
184	9.24	34.01	2.44	171	250	8.69	34.24	1.36	26.60	145	0.61
218	9.08	34.16	1.90	157	300	8.12	34.29	0.94	26.72	133	0.68
249	8.70	34.24	1.37	145	400	7.11	34.29	0.68	26.86	120	0.81
298	8.16	34.29	0.96	134	500	6.29	34.33	0.39	27.01	106	0.93
353	7.60	34.29	0.80	126	600	5.68	34.37	0.31	27.11	96	1.04
437	6.76	34.29	0.54	114							
521	6.14	34.34	0.35	103							
606	5.66	34.37	0.31	95							

ORCA; October 17, 1959; 1822 GCT; 29°32'N, 118°02'W; sounding, 2000 fm; wind, 300°, force 3; weather, cloudy; sea, rough; wire angle, 11°. 107.60

2	20.48	33.75	4.88	421	0	(20.48)	(33.75)	(4.88)	(23.70)	(421)	(0.00)
12	20.48	33.75	4.84	421	10	20.48	33.75	4.85	23.70	421	0.04
31	20.48	33.78	4.93	419	20	20.48	33.76	4.88	23.70	420	0.08
41	18.48	33.57	5.43	385	30	20.48	33.78	4.93	23.72	419	0.13
56	17.22	33.59	5.20	354	50	17.62	33.58	5.27	24.29	364	0.20
71	15.74	33.66	5.20	316	75	15.02	33.65	5.02	24.94	302	0.29
95	12.57	33.58	4.25	259	100	12.10	33.58	4.13	25.48	251	0.36
114	11.28	33.58	3.91	236	125	10.63	33.62	3.76	25.79	222	0.42
133	10.22	33.68	3.61	211	150	9.61	33.76	3.30	26.06	196	0.47
152	9.55	33.77	3.22	193	200	8.71	34.02	2.40	26.42	162	0.56
181	9.00	33.94	2.74	172	250	8.40	34.18	1.50	26.60	145	0.64
215	8.59	34.08	2.11	156	300	7.74	34.23	1.07	26.73	132	0.71
244	8.46	34.18	1.57	147	400	7.11	34.30	0.49	26.88	119	0.84
293	7.78	34.22	1.13	133	500	6.09	34.33	0.31	27.03	104	0.96
346	7.62	34.28	0.68	127	600	(5.49)	(34.34)	(0.23)	(27.12)	(95)	(1.07)
430	6.78	34.31	0.42	113							
513	5.97	34.33	0.30	102							
598	5.50	34.34	0.23	96							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T_3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m
107.70	ORCA; October 17-18, 1959; 0229, 2324 GCT; 29°13'N, 118°37'W; sounding, 2000 fm; wind, 300°, force 2; weather, overcast; sea, rough; wire angle, 17°, 18°.										
1	19.37	33.52	5.07	409	0	(19.37)	(33.52)	(5.07)	(23.82)	(409)	(0.00)
10	19.39	33.55	5.09	407	10	19.39	33.55	5.09	23.84	407	0.04
29	19.49	33.63	4.98	405	20	19.43	33.60	5.00	23.86	405	0.08
39	18.61	33.57	5.35	388	30	19.49	33.64	4.98	23.87	405	0.12
53	17.34	33.71	5.41	348	50	17.52	33.69	5.41	24.39	355	0.20
67	16.16	33.75	5.53	318	75	16.25	33.84	5.46	24.82	313	0.28
90	14.39	33.51	5.23	299	100	14.13	33.54	5.20	25.05	292	0.36
108	13.65	33.64	5.10	275	125	12.74	33.67	4.83	25.44	255	0.43
126	12.52	33.67	4.77	251	150	10.80	33.62	4.41	25.75	225	0.49
145	11.02	33.61	4.46	229	200	8.92	33.82	3.46	26.23	180	0.59
172	9.90	33.69	4.17	205	250	8.38	34.02	2.30	26.46	158	0.68
204	8.86	33.84	3.35	177	300	7.54	34.06	1.79	26.63	142	0.76
232	8.72	33.98	2.47	165	400	6.56	34.13	0.92	26.82	124	0.89
278	7.74	34.02	2.14	148	500	5.98	34.25	0.45	26.99	108	1.02
330	7.30	34.11	1.37	135	600	5.49	34.33	0.23	27.11	96	1.12
410	6.46	34.14	0.84	122	700	4.97	34.39	0.21	27.22	86	1.22
491	5.99	34.24	0.47	109	800	4.65	34.44	0.25	27.29	79	1.31
574	5.62	34.31	0.28	100	1000	4.04	34.51	0.40	27.42	67	1.48
					1200	3.49	34.54	0.61	27.49	60	1.62
383a)	6.73	34.13	1.04	126	1500	2.74	34.59	1.11	27.60	49	1.82
479	6.10	34.23	0.49	111	2000	2.04	34.64	1.78	27.70	40	2.09
575	5.64	34.32	0.27	99	2500	1.77	34.67	2.20			
671	5.08	34.38	0.20	88							
766	4.75	34.42	0.23	81							
958	4.18	34.50	0.38	69							
1150	3.60	34.53	0.57	62							
1342	3.16	34.56	0.77	55							
1534	2.66	34.61u	1.18								
1725	2.35	34.61	1.38	45							
1917	2.13	34.63	1.71	41							
2108	1.96	34.65	1.85	38							
2302	1.85	34.69u	2.08								
2495	1.76	34.67	2.19	36							
2691	1.72	34.67	2.32	35							
2789	1.66	34.67	2.42	34							
107.80	ORCA; October 18, 1959; 0731 GCT; 28°51'N, 119°19'W; sounding, 2000+ fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 09°.										
1	20.96	34.09	5.05	408	0	(20.96)	(34.09)	(5.05)	(23.83)	(408)	(0.00)
11	20.98	34.11	5.01	407	10	20.98	34.11	5.01	23.84	407	0.04
31	20.95	34.07	4.99	410	20	20.97	34.09	5.01	23.83	408	0.08
41	20.94	34.09	4.95	407	30	20.95	34.07	4.99	23.82	409	0.12
56	18.74	33.82	5.59	373	50	20.75	34.07	5.00	23.87	404	0.20
71	17.76	33.86	5.51	346	75	17.47	33.88	5.48	24.57	338	0.30
95	16.24	33.96	5.27	305	100	16.00	33.95	5.21	24.96	300	0.38
114	14.61	33.84	4.99	279	125	13.67	33.78	4.85	25.34	265	0.45
134	12.86	33.73	4.69	253	150	11.74	33.68	4.32	25.63	236	0.51
154	11.48	33.68	4.24	232	200	9.39	33.80	3.30	26.14	188	0.62
183	9.95	33.72	3.68	203	250	8.79	34.02	2.39	26.41	163	0.71
217	9.02	33.91	2.89	175	300	8.30	34.15	1.65	26.59	146	0.79
247	8.81	34.01	2.42	164	400	7.43	34.28	0.71	26.81	125	0.93
296	8.32	34.14	1.71	147	500	6.60	34.32	0.38	26.96	111	1.06
350	7.90	34.25	1.06	133	600	5.79	34.36	0.28	27.09	98	1.17
433	7.12	34.29	0.56	120							
517	6.46	34.32	0.37	109							
602	5.78	34.36	0.28	97							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; October 18, 1959; 1242 GCT; 28°32.5'N, 120°01'W; sounding, 2000+ fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 11°. 107.90

1	20.65	34.13	5.00	397	0	(20.65)	(34.13)	(5.00)	(23.95)	(397)	(0.00)
11	20.68	34.12	5.05	399	10	20.68	34.12	5.05	23.93	399	0.04
30	20.66	34.11	5.06	399	20	20.68	34.12	5.06	23.93	399	0.08
40	20.66	34.10	5.04	399	30	20.66	34.11	5.06	23.93	399	0.12
55	17.95	33.78	5.58	357	50	18.50	33.83	5.53	24.27	366	0.20
69	17.22	33.81	5.56	338	75	17.28	33.89	5.53	24.61	334	0.28
94	16.81	34.12	5.32	306	100	16.42	34.10	5.28	24.98	299	0.36
114	15.34	34.02	5.13	281	125	14.13	33.91	4.99	25.34	264	0.44
134	12.91	33.80	4.87	249	150	10.93	33.66	4.58	25.77	224	0.50
154	10.58	33.66	4.47	218	200	8.90	33.84	3.55	26.25	178	0.60
183	9.28	33.75	3.82	191	250	8.59	34.06	2.44	26.47	157	0.69
217	8.69	33.93	3.25	168	300	8.85	34.28	1.24	26.60	144	0.76
248	8.59	34.05	2.50	158	400	7.55	34.34	0.67	26.84	122	0.90
296	8.89	34.28	1.30	145	500	6.83	34.38	0.37	26.97	109	1.02
351	8.00	34.32	0.90	129	600	5.83	34.37	0.30	27.09	98	1.14
433	7.30	34.35	0.51	117							
518	6.69	34.38	0.36	107							
602	5.82	34.37	0.29	97							

ORCA; October 20, 1959; 2205 GCT; 29°50'N, 115°52'W; sounding, 44 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 05°. 110.33

1	16.88	33.55	5.41	349	0	(16.88)	(33.55)	(5.41)	(24.45)	(349)	(0.00)
11	16.50	33.57	5.45	339	10	16.52	33.57	5.45	24.55	339	0.03
31	16.48	33.65	5.36	333	20	16.49	33.61	5.41	24.59	336	0.07
51	14.48	33.62	5.08	293	30	16.49	33.65	5.36	24.62	333	0.10
					50	14.70	33.63	5.09	25.00	297	0.16

ORCA; October 20, 1959; 2010 GCT; 29°44.5'N, 116°00'W; sounding, 766 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 27°. 110.35

1	19.52	33.73	4.93	398	0	(19.52)	(33.73)	(4.93)	(23.94)	(398)	(0.00)
10	19.38	33.69	5.11	397	10	19.38	33.69	5.11	23.95	397	0.04
28	18.26	33.68	5.25	371	20	18.90	33.68	5.18	24.06	386	0.08
36	17.44	33.66	5.36	354	30	18.17	33.68	5.28	24.24	369	0.12
50	16.44	33.66	5.32	331	50	16.44	33.66	5.32	24.64	331	0.19
62	14.80	33.73	4.51	291	75	13.10	33.77	3.39	25.44	254	0.26
82	13.15	33.88	3.27	248	100	12.32	33.86	3.20	25.66	234	0.32
99	12.32	33.86	3.19	234	125	10.59	33.70	3.89	25.86	215	0.38
116	10.74	33.65	4.03	222	150	10.06	33.80	3.30	26.03	199	0.43
133	10.46	33.74	3.72	210	200	9.31	34.02	2.32	26.32	171	0.52
157	9.94	33.84	3.11	194	250	9.18	34.19	1.69	26.48	156	0.61
187	9.52	33.98	2.47	177	300	9.08	34.35	0.92	26.62	143	0.69
213	9.12	34.07	2.16	165	400	7.45	34.30	0.80	26.83	123	0.82
256	9.18	34.21	1.58	155	500	6.59	34.33	0.45	26.97	110	0.95
303	9.06	34.36	0.89	142							
380	7.63	34.30	0.83	126							
459	6.90	34.32	0.58	115							
542	6.24	34.34	0.36	105							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

110.40 ORCA; October 20, 1959; 1640 GCT; 29°37'N, 116°18'W; sounding, 1200 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 09°.

1	20.44	33.86	5.82u	412	0	(20.44)	(33.86)		(23.80)	(412)	(0.00)
11	20.48	33.86	5.02	412	10	20.48	33.86		23.79	412	0.04
31	20.42	33.86	4.97	411	20	20.47	33.86	4.99	23.79	412	0.08
41	17.62	33.68	5.25	356	30	20.43	33.86	4.97	23.80	411	0.12
56	16.40	33.73	5.14	325	50	16.70	33.72	5.18	24.63	332	0.20
71	14.33	33.64	4.90	288	75	13.90	33.64	4.79	25.17	280	0.27
96	12.07	33.67	4.11	243	100	11.91	33.68	4.02	25.60	239	0.34
116	11.35	33.73	3.66	226	125	10.98	33.75	3.62	25.82	218	0.40
135	10.60	33.78	3.61	209	150	10.42	33.89	2.94	26.04	198	0.45
155	10.38	33.93	2.77	194	200	9.88	34.11	2.02	26.30	173	0.55
185	9.96	34.05	2.20	179	250	9.79	34.31	1.15	26.47	157	0.63
219	9.86	34.19	1.77	167	300	8.72	34.31	1.13	26.64	141	0.71
249	9.80	34.31	1.17	157	400	7.40	34.28	0.87	26.82	124	0.85
298	8.78	34.31	1.13	141	500	6.72	34.33	0.43	26.95	111	0.97
353	7.74	34.23	1.15	132	600	5.90	34.37	0.33	27.09	98	1.08
437	7.20	34.32	0.62	118							
521	6.54	34.33	0.40	109							
606	5.86	34.38	0.33	97							

110.50 ORCA; October 20, 1959; 1052 GCT; 29°16'N, 116°59'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 15°.

1	21.94	34.03	4.77	438	0	(21.94)	(34.03)	(4.77)	(23.52)	(438)	(0.00)
11	21.96	34.02	4.79	439	10	21.96	34.02	4.78	23.51	439	0.04
30	21.94	34.04	4.72	437	20	21.96	34.03	4.76	23.52	438	0.09
39	20.73	33.91	4.90	415	30	21.94	34.04	4.72	23.53	437	0.13
54	16.65	33.66	5.38	336	50	17.10	33.67	5.38	24.49	345	0.21
68	15.24	33.77	4.91	297	75	14.53	33.76	4.68	25.14	284	0.29
91	12.73	33.68	4.20	255	100	12.08	33.67	4.23	25.56	243	0.36
111	10.97	33.66	4.31	224	125	10.59	33.75	3.75	25.90	212	0.41
130	10.51	33.76	3.68	210	150	9.90	33.80	3.40	26.06	196	0.46
148	9.94	33.79	3.45	198	200	9.29	34.03	2.41	26.33	170	0.56
177	9.48	33.93	2.86	180	250	9.05	34.18	1.56	26.49	155	0.64
210	9.24	34.07	2.18	166	300	8.36	34.24	1.14	26.64	141	0.72
238	9.18	34.16	1.69	158	400	7.53	34.32	0.55	26.83	123	0.86
286	8.52	34.22	1.27	145	500	6.69	34.36	0.24	26.98	109	0.98
338	7.98	34.28	0.90	132	600	(5.83)	(34.38)		(27.10)	(97)	(1.09)
420	7.37	34.33	0.42	120							
503	6.64	34.36	0.23	108							
587	5.96	34.38	0.20	98							

110.60 ORCA; October 20, 1959; 0505 GCT; 28°56'N, 117°38.5'W; sounding, 2000+ fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 18°.

1	20.86	33.90	4.65	420	0	(20.86)	(33.90)	(4.65)	(23.71)	(420)	(0.00)
10	20.86	33.90	4.77	420	10	20.86	33.90	4.77	23.71	420	0.04
29	20.87	33.88	4.80	421	20	20.86	33.89	4.80	23.70	420	0.08
39	19.61	33.84	4.86	392	30	20.87	33.88	4.80	23.70	421	0.13
53	14.94	33.56	5.23	307	50	16.14	33.61	5.22	24.67	328	0.20
67	13.48	33.55	4.80	278	75	12.75	33.56	4.43	25.35	264	0.27
90	11.42	33.62	3.85	236	100	11.03	33.65	3.80	25.74	226	0.34
109	10.38	33.71	3.72	211	125	9.81	33.74	3.67	26.03	199	0.39
127	9.68	33.75	3.63	197	150	9.09	33.90	3.08	26.27	176	0.44
145	9.16	33.87	3.18	180	200	8.63	34.12	2.03	26.51	154	0.52
173	8.85	34.02	2.67	164	250	8.41	34.20	1.47	26.60	144	0.60
205	8.60	34.13	1.94	152	300	8.02	34.26	1.00	26.72	134	0.67
233	8.48	34.15	1.76	149	400	6.91	34.27	0.61	26.88	118	0.80
279	8.24	34.25	1.16	138	500	5.85	34.29	0.45	27.03	104	0.92
330	7.63	34.27	0.86	128							
410	6.80	34.27	0.59	117							
491	5.90	34.28	0.47	105							
574	5.56	34.34	0.35	96							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m	
ORCA; October 19, 1959; 0541 GCT; 28°37'N, 118°16'W; sounding, 1000+ fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 17°.												110.70
1	19.75	33.75	5.11	402	0	(19.75)	(33.75)	(5.11)	(23.89)	(402)	(0.00)	
11	19.75	33.77	5.05	400	10	19.75	33.77	5.06	23.91	400	0.04	
29	19.74	33.78	5.05	400	20	19.74	33.78	5.05	23.92	400	0.08	
39	19.73	33.78	5.11	400	30	19.74	33.78	5.06	23.92	400	0.12	
53	18.32	33.77	5.50	366	50	18.63	33.77	5.41	24.19	374	0.20	
67	17.62	33.70	5.57	355	75	17.17	33.75	5.59	24.54	341	0.29	
90	15.55	33.68	5.48	310	100	14.57	33.69	5.20	25.08	289	0.37	
108	13.86	33.71	4.92	274	125	12.42	33.74	4.51	25.55	244	0.44	
126	12.38	33.74	4.51	244	150	11.00	33.74	4.21	25.82	219	0.49	
146	11.21	33.73	4.34	223	200	9.15	33.93	2.98	26.28	175	0.59	
173	9.92	33.82	3.53	195	250	8.62	34.12	1.96	26.51	153	0.68	
206	9.06	33.97	2.88	171	300	8.37	34.25	1.13	26.65	140	0.76	
233	8.77	34.08	2.32	158	400	7.45	34.33	0.62	26.85	121	0.89	
280	8.46	34.21	1.40	144	500	6.60	34.37	0.35	27.00	107	1.01	
331	8.20	34.31	0.84	133								
411	7.36	34.33	0.59	120								
493	6.68	34.37	0.35	108								
575	5.86	34.36	0.31	98								
ORCA; October 19, 1959; 0010 GCT; 28°14.5'N, 118°55'W; sounding, 2000+ fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 26°.												110.80
2	20.18	33.91	5.02	401	0	(20.18)	(33.91)	(5.02)	(23.90)	(401)	(0.00)	
11	20.21	33.93	5.09	400	10	20.20	33.93	5.08	23.91	400	0.04	
29	20.16	33.92	5.02	400	20	20.19	33.93	5.07	23.92	400	0.08	
55	19.18	33.92	5.38	376	30	20.15	33.92	5.02	23.92	400	0.12	
64	18.34	33.89	5.46	358	50	20.12	33.92	5.03	23.92	399	0.20	
77	17.32	33.82	5.42	339	75	17.60	33.84	5.43	24.50	344	0.29	
90	16.36	33.87	5.27	314	100	16.08	33.88	5.26	24.89	307	0.38	
103	15.54	33.83	5.23	299	125	13.30	33.77	4.74	25.40	259	0.45	
124	13.38	33.77	4.76	260	150	11.60	33.73	4.28	25.70	230	0.51	
142	12.20	33.74	4.51	240	200	9.53	33.87	3.12	26.17	186	0.62	
167	10.59	33.73	3.82	213	250	8.97	34.18	1.76	26.50	154	0.70	
193	9.72	33.84	3.27	191	300	8.53	34.26	1.24	26.64	141	0.78	
219	9.19	34.01	2.54	170	400	7.34	34.29	0.67	26.83	123	0.92	
262	8.90	34.22	1.57	150	500	6.54	34.30	0.38	26.96	111	1.04	
312	8.39	34.27	1.13	138								
387	7.50	34.29	0.73	125								
465	6.76	34.29	0.45	115								
546	6.33	34.33	0.31	106								
ORCA; October 18, 1959; 1736 GCT; 28°00'N, 119°41'W; sounding, 2000+ fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 08°.												110.90
1	21.08	34.13	4.83	408	0	(21.08)	(34.13)	(4.83)	(23.83)	(408)	(0.00)	
11	21.08	34.13	4.88	408	10	21.08	34.13	4.88	23.83	408	0.04	
31	21.08	34.13	4.94	408	20	21.08	34.13	4.91	23.83	408	0.08	
41	21.0	34.13	4.95	406	30	21.08	34.13	4.94	23.83	408	0.12	
56	18.86	33.88	5.35	371	50	19.74	33.95	5.21	24.05	387	0.20	
70	18.07	33.87	5.39	353	75	17.81	33.87	5.38	24.47	347	0.29	
95	16.62	33.87	5.32	320	100	16.51	33.89	5.31	24.80	316	0.38	
115	14.68	33.77	5.15	286	125	13.55	33.72	4.98	25.31	267	0.45	
134	12.56	33.69	4.80	250	150	11.34	33.68	4.60	25.71	229	0.52	
154	11.16	33.69	4.54	225	200	9.99	33.90	2.85	26.12	190	0.62	
183	10.31	33.81	3.41	202	250	8.95	34.05	2.31	26.41	163	0.71	
217	9.65	33.99	2.41	179	300	8.67	34.23	1.39	26.59	146	0.79	
246	8.98	34.04	2.34	164	400	7.65	34.31	0.64	26.80	126	0.94	
295	8.70	34.22	1.46	147	500	6.63	34.32	0.30	26.96	111	1.06	
349	8.18	34.28	0.90	135	600	5.88	34.36	0.23	27.08	99	1.17	
432	7.30	34.31	0.50	120								
516	6.47	34.32	0.28	109								
601	5.88	34.36	0.22	99								

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

110.90 ORCA; October 18, 1959; 1856 GCT;[a] 28°00'N, 119°41'W; sounding, 2000+ fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 07°.

49	18.99	33.90	5.36	372
59	18.29	33.84	5.49	360
64	17.72	33.80	5.52	350
69	17.54	33.82	5.43	344
74	17.36	33.81	5.44	341
78	17.28	33.84	5.43	337
83	17.30	33.88	5.46	335
88	17.38	33.95	5.28	331
93	16.82	33.93	5.19	320
97	16.40	33.82	5.28	319
100	16.10	33.78	5.28	315
103	-	33.77	5.29	
106	-	33.76	5.25	
109	15.05	33.72	5.29	298
113	14.92	33.82	5.19	287
118	14.14	33.73	5.08	278
123	13.38	33.69	5.00	266
128	13.11	33.69	4.92	261

113.30 BLACK DOUGLAS; October 29, 1959; 1728 GCT; 29°22'N, 115°18'W; sounding, 30 fm; wind, 270°, force 1; weather, cloudy; sea, moderate; wire angle, 00°.

0	16.28	33.68	5.04	326	0	16.28	33.68	5.04	24.69	326	0.00
10	16.26	33.68	5.14	326	10	16.26	33.68	5.14	24.69	326	0.03
30	15.00	33.67	5.10	300	20	16.04	33.68	5.14	24.75	321	0.06
40	14.69	33.68	5.09	292	30	15.00	33.67	5.10	24.97	300	0.10

113.35 BLACK DOUGLAS; October 29, 1959; 1441 GCT; 29°11.5'N, 115°38'W; sounding, 650 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 03°.

0	19.60	33.83	5.09	392	0	19.60	33.83	5.09	24.00	392	0.00
10	19.63	33.80	5.00	395	10	19.63	33.80	5.00	23.97	395	0.04
30	16.96	33.73	5.30	338	20	19.00	33.78	5.06	24.11	382	0.08
40	15.84	33.68	5.05	317	30	16.96	33.73	5.30	24.57	338	0.11
55	14.26	33.73	4.46	280	50	14.87	33.71	4.69	25.03	294	0.18
71	13.18	33.77	3.92	256	75	13.02	33.78	3.87	25.46	253	0.25
96	11.79	33.85	3.36	224	100	11.63	33.85	3.21	25.78	222	0.31
116	11.55	33.96	2.45	212	125	10.94	34.00	2.35	26.03	199	0.36
138	10.84	34.05	2.29	194	150	10.60	34.11	2.05	26.18	185	0.41
156	10.48	34.14	1.92	181	200	9.92	34.32	1.24	26.46	158	0.50
185	10.24	34.30	1.37	165	250	9.53	34.43	0.90	26.61	144	0.57
221	9.48	34.35	1.15	149	300	9.00	34.45	0.70	26.71	134	0.64
251	9.53	34.43	-	144	400	7.98	34.39	0.66	26.82	123	0.78
301	8.98	34.45	0.69	134	500	6.63	34.35	0.47	26.97	109	0.90
357	8.64	34.46	0.62	128	600	5.88	34.40	0.33	27.12	96	1.01
441	7.26	34.33	0.69	119							
526	6.42	34.36	0.38	105							
611	5.80	34.41	0.33	94							

a) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; October 29, 1959; 1140 GCT; 29°02'N, 115°57'W; sounding, 1000 fm; wind, 280°, force 4; weather, overcast; sea, rough; wire angle, 13°.											113.40
0	18.54	33.69	5.30	377	0	18.54	33.69	5.30	24.16	377	0.00
10	18.54	33.68	5.26	378	10	18.54	33.68	5.26	24.15	378	0.04
30	18.21	33.65	5.40	372	20	18.42	33.68	5.30	24.17	376	0.08
39	18.07	33.65	5.35	368	30	18.21	33.65	5.40	24.21	372	0.11
53	16.68	33.84	4.91	324	50	16.96	33.82	4.96	24.64	331	0.18
69	15.15	33.78	4.70	295	75	14.60	33.99	3.85	25.30	268	0.26
93	14.04	34.16	2.56	244	100	14.01	34.21	2.32	25.59	240	0.32
112	13.76	34.29	1.73	230	125	12.60	34.16	2.02	25.84	217	0.38
132	12.40	34.15	2.03	214	150	12.30	34.27	1.47	25.98	203	0.43
151	12.28	34.27	1.47	202	200	11.07	34.33	1.30	26.26	177	0.53
179	11.72	34.34	1.24	187	250	10.49	34.45	0.89	26.46	158	0.62
212	10.82	34.33	1.32	172	300	9.42	34.41	0.96	26.60	144	0.69
241	10.58	34.43	0.90	161	400	7.52	34.30	0.96	26.82	124	0.84
288	9.75	34.44	0.90	146	500	6.64	34.37	0.49	26.99	108	0.96
340	8.15	34.25	1.19	136	600	(6.09)	(34.43)		(27.11)	(96)	(1.06)
422	7.36	34.32	0.84	120							
505	6.61	34.37	0.46	107							
588	6.15	34.42	0.27	98							
BLACK DOUGLAS; October 29, 1959; 0616 GCT; 28°43'N, 116°39'W; sounding, 1860 fm; wind, 280°, force 4; weather, overcast; sea, very rough; wire angle, 11°.											113.50
0	20.38	33.87	5.00	409	0	20.38	33.87	5.00	23.82	409	0.00
10	20.40	33.88	4.92	409	10	20.40	33.88	4.92	23.82	409	0.04
29	19.36	33.79	5.15	390	20	20.40	33.88	4.92	23.82	409	0.08
39	18.09	33.77	5.15	360	30	19.28	33.78	5.15	24.04	388	0.12
49	17.04	33.71	5.27	341	50	16.99	33.71	5.27	24.55	340	0.19
63	15.83	33.74	5.02	312	75	14.80	33.77	4.46	25.09	288	0.27
79	14.38	33.79	4.14	278	100	13.10	34.00	2.43	25.62	238	0.34
99	13.08	33.96	2.53	240	125	12.93	34.22	1.72	25.82	219	0.40
124	12.96	34.22	1.73	219	150	12.62	34.34	1.38	25.98	204	0.45
142	12.76	34.31	1.46	208	200	11.35	34.31	1.54	26.20	183	0.55
174	12.10	34.37	1.26	192	250	10.26	34.33	1.18	26.41	163	0.64
203	11.26	34.31	1.55	181	300	9.41	34.39	0.99	26.60	145	0.72
233	10.67	34.32	1.11	170	400	7.78	34.36	0.71	26.83	123	0.86
273	9.74	34.36	1.24	152	500	6.85	34.37	0.49	26.96	110	0.98
332	9.08	34.42	0.74	138							
408	7.64	34.36	0.71	122							
483	6.97	34.36	0.54	112							
562	6.39	34.43	0.28	100							
BLACK DOUGLAS; October 29, 1959; 0054 GCT; 28°22'N, 117°16.5'W; sounding, 1850 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 07°.											113.60
0	21.84	34.09	4.90	431	0	21.84	34.09	4.90	23.59	431	0.00
10	21.84	34.12	4.79	428	10	21.84	34.12	4.79	23.62	428	0.04
30	21.28	34.04	4.74	420	20	21.53	34.08	4.75	23.66	424	0.09
60	16.52	33.77	5.02	325	30	21.28	34.04	4.74	23.71	420	0.13
70	15.30	33.78	4.59	298	50	18.15	33.86	4.94	24.38	356	0.21
85	13.64	33.78	4.10	264	75	14.80	33.78	4.41	25.10	288	0.29
100	12.52	33.89	3.70	235	100	12.52	33.89	3.70	25.65	235	0.35
116	11.44	33.80	3.42	222	125	11.10	33.82	3.20	25.86	215	0.41
141	10.64	33.90	2.82	201	150	10.47	34.02	2.52	26.13	190	0.46
161	10.34	34.11	2.26	181	200	10.02	34.25	1.55	26.39	165	0.55
191	10.12	34.22	1.69	169	250	9.61	34.43	1.11	26.59	146	0.63
221	9.82	34.33	1.32	156	300	9.13	34.43	0.63	26.67	138	0.70
251	9.60	34.43	1.09	145	400	7.64	34.42	0.48	26.89	117	0.84
300	9.13	34.43	0.63	138	500	6.59	34.42	0.37	27.04	103	0.95
356	8.16	34.42	0.49	124	600	5.76	34.42	0.35	27.15	92	1.06
442	7.22	34.42	0.45	111							
526	6.32	34.42	0.34	100							
611	5.69	34.42	0.35	92							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

113.70 BLACK DOUGLAS; October 28, 1959; 1953 GCT; 28°04'N, 117°53'W; sounding, 1670 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 14°.

0	19.58	33.78	5.10	396	0	19.58	33.78	5.10	23.96	396	0.00
10	19.58	33.79	5.10	395	10	19.58	33.79	5.10	23.97	395	0.04
29	18.29	33.64	5.38	375	20	19.58	33.79	5.10	23.97	395	0.08
39	17.16	33.60	5.47	351	30	18.20	33.63	5.39	24.20	373	0.12
53	16.28	33.63	5.36	330	50	16.50	33.62	5.39	24.59	336	0.19
68	15.32	33.68	5.36	306	75	14.80	33.67	5.31	25.02	296	0.27
92	13.42	33.65	4.95	270	100	13.15	33.68	4.77	25.36	262	0.34
112	12.86	33.71	4.62	255	125	11.80	33.75	4.50	25.67	233	0.40
132	11.18	33.74	4.47	222	150	10.32	33.78	4.01	25.96	205	0.46
151	10.30	33.78	3.97	204	200	9.18	33.98	2.70	26.31	172	0.55
180	9.66	33.92	2.96	184	250	8.88	34.16	1.79	26.50	154	0.64
216	8.92	34.01	2.54	166	300	8.98	34.36	0.95	26.64	141	0.71
244	8.87	34.14	1.92	156	400	7.67	34.37	0.57	26.85	121	0.85
294	9.02	34.36	0.98	142	500	6.61	34.36	0.33	26.99	108	0.97
347	8.24	34.34	0.74	132	600	(5.58)	(34.36)	(0.35)	(27.12)	(95)	(1.08)
429	7.36	34.38	0.49	116							
511	6.50	34.36	0.32	106							
598	5.60	34.36	0.35	95							

113.80 BLACK DOUGLAS; October 28, 1959; 1446 GCT; 27°42.5'N, 118°32'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 07°.

1	20.12	33.93	4.93	398	0	(20.12)	(33.93)	(4.93)	(23.94)	(398)	(0.00)
11	20.14	33.95	4.96	397	10	20.14	33.94	4.96	23.94	398	0.04
31	20.15	33.94	5.30	398	20	20.15	33.94	5.13	23.94	398	0.08
41	20.15	33.95	4.94	398	30	20.15	33.94	5.28	23.94	398	0.12
56	18.46	33.89	5.36	361	50	19.20	33.92	5.21	24.16	376	0.20
72	17.45	33.82	5.35	342	75	17.29	33.83	5.33	24.58	337	0.29
96	16.29	33.96	5.16	306	100	16.10	33.95	5.09	24.94	302	0.37
116	14.90	33.87	4.62	283	125	14.10	33.82	4.52	25.28	270	0.44
138	12.79	33.77	4.48	249	150	11.46	33.75	4.20	25.74	226	0.50
155	10.98	33.75	4.02	218	200	9.67	33.95	2.89	26.21	182	0.61
196	9.74	33.93	2.98	184	250	9.02	34.16	1.95	26.48	156	0.69
220	9.38	34.02	2.58	172	300	8.60	34.26	1.22	26.63	142	0.77
250	9.02	34.16	1.95	156	400	7.51	34.31	0.69	26.83	123	0.91
299	8.62	34.26	1.24	143	500	6.66	34.38	0.37	27.00	106	1.03
354	7.96	34.29	0.88	131	600	6.02	34.43	0.24	27.12	95	1.14
438	7.17	34.34	0.54	116							
524	6.48	34.40	0.31	103							
607	5.99	34.43	0.23	94							

113.90 BLACK DOUGLAS; October 28, 1959; 0834 GCT; 27°22'N, 119°12'W; sounding, 2000 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 08°.

0	20.93	34.11	4.90	406	0	20.93	34.11	4.90	23.85	406	0.00
10	20.95	34.12	4.85	406	10	20.95	34.12	4.85	23.86	406	0.04
30	20.93	34.11	4.93	406	20	20.94	34.11	4.93	23.85	406	0.08
60	18.86	33.91	5.36	368	30	20.93	34.11	4.93	23.85	406	0.12
69	18.67	33.89	5.27	365	50	20.92	34.11	4.93	23.85	406	0.20
85	17.34	33.87	5.27	336	75	18.40	33.88	5.25	24.34	360	0.30
99	16.34	33.87	5.21	314	100	16.30	33.87	5.19	24.83	313	0.38
114	14.25	33.78	4.47	276	125	13.48	33.78	4.40	25.38	261	0.46
139	12.50	33.78	4.38	243	150	11.48	33.76	4.20	25.74	226	0.52
158	10.88	33.75	3.96	216	200	9.78	33.92	2.74	26.18	185	0.62
189	9.96	33.87	2.97	192	250	9.29	34.18	1.93	26.46	158	0.71
218	9.50	34.05	2.33	172	300	8.83	34.30	1.23	26.62	143	0.79
248	9.30	34.18	1.98	159	400	7.68	34.34	0.59	26.82	124	0.93
297	8.86	34.30	1.25	144	500	6.70	34.39	0.34	27.00	106	1.05
351	8.21	34.33	0.84	132	600	5.94	34.40	0.26	27.11	96	1.16
436	7.31	34.34	0.48	118							
520	6.53	34.40	0.31	104							
604	5.92	34.40	0.26	96							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; October 26, 1959; 0115 GCT; 28°56'N, 114°41.5'W; sounding, 40 fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 03°.											117.26
1	19.92	33.78	5.13	404	0	(19.92)	(33.78)	(5.13)	(23.88)	(404)	(0.00)
11	19.92	33.83	5.16	400	10	19.92	33.83	5.16	23.91	400	0.04
31	17.04	33.76	5.01	338	20	18.60	33.81	5.12	24.23	370	0.08
51	14.08	33.65	4.42	282	30	17.06	33.76	5.02	24.57	338	0.11
					50	14.17	33.65	4.45	25.13	284	0.18
BLACK DOUGLAS; October 26, 1959; 0339 GCT; 28°48'N, 114°56.5'W; sounding, 54 fm; wind, 300°, force 6; weather, clear; sea, very rough; wire angle, 07°.											117.30
0	19.56	33.77	5.14	396	0	19.56	33.77	5.14	23.96	396	0.00
10	19.57	33.78	5.27	395	10	19.57	33.78	5.27	23.96	395	0.04
30	17.14	33.71	4.89	343	20	19.55	33.78	5.26	23.97	395	0.08
50	15.32	33.70	4.64	304	30	17.14	33.71	4.89	24.51	343	0.12
74	14.10	33.89	3.34	265	50	15.32	33.70	4.64	24.92	304	0.18
					75	(14.04)	(33.89)	(3.32)	(25.34)	(265)	(0.25)
BLACK DOUGLAS; October 26, 1959; 0625 GCT; 28°38'N, 115°16'W; sounding, 110 fm; wind, 300°, force 6; weather, clear; sea, very rough; wire angle, 15°.											117.35
0	19.27	33.76	5.23	390	0	19.27	33.76	5.23	24.02	390	0.00
10	19.26	33.77	5.19	388	10	19.26	33.77	5.19	24.04	388	0.04
29	18.33	33.71	5.05	370	20	19.26	33.77	5.17	24.04	388	0.08
48	15.10	33.68	4.77	301	30	18.30	33.71	5.05	24.23	370	0.12
73	13.14	33.80	3.64	253	50	15.02	33.68	4.75	24.97	300	0.18
97	12.14	33.93	2.74	225	75	13.08	33.81	3.59	25.48	252	0.25
121	11.86	33.98	2.48	216	100	11.99	33.94	2.64	25.79	221	0.31
151	11.15	34.13	1.84	193	125	11.72	33.98	2.42	25.87	214	0.37
					150	11.17	34.12	1.87	26.08	194	0.42
BLACK DOUGLAS; October 26, 1959; 0922 GCT; 28°28'N, 115°35.5'W; sounding, 500 fm; wind, 300°, force 5; weather, cloudy; sea, very rough; wire angle, 23°.											117.40
0	20.28	33.86	4.95	407	0	20.28	33.86	4.95	23.84	407	0.00
9	20.30	33.86	4.96	408	10	20.30	33.86	4.97	23.83	408	0.04
28	19.82	33.85	5.04	396	20	20.30	33.86	4.97	23.83	408	0.08
37	19.37	33.80	5.12	389	30	19.73	33.84	5.06	23.98	394	0.12
51	17.45	33.76	5.31	346	50	17.50	33.76	5.30	24.47	347	0.20
65	15.68	33.68	4.93	313	75	14.10	33.71	4.35	25.19	278	0.27
86	13.36	33.77	3.99	260	100	12.48	33.85	3.32	25.62	237	0.34
103	12.32	33.86	3.22	234	125	11.33	33.95	2.69	25.91	210	0.40
120	11.54	33.89	2.82	218	150	11.02	34.08		26.08	194	0.45
137	11.24	34.01	2.56	203	200	9.57	34.10		26.34	169	0.54
164	10.60	34.09	2.19	186	250	9.01	34.22		26.53	152	0.62
221	9.20	34.13	-	161	300	8.82	34.31		26.63	142	0.70
264	8.95	34.26	1.11	148	400	7.63	34.35		26.84	122	0.84
314	8.74	34.33	0.82	139	500	6.57	34.31		26.96	111	0.96
392	7.75	34.35	-	124							
472	6.80	34.31	0.41	114							
555	6.24	34.34	0.30	104							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_{-5}^{3}	Z	T	S	O_2	σ_t	δT_{-5}^{3}	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
117.50	BLACK DOUGLAS; October 27, 1959; 0729 GCT; 28°08'N, 116°15'W; sounding, 2250 fm; wind, 320°, force 5; weather, sky obscured; sea, very rough; wire angle, 25°.										
0	20.29	33.83	4.86	410	0	20.29	33.83	4.86	23.81	410	0.00
8	20.30	33.84	5.04	409	10	20.30	33.84	5.04	23.81	410	0.04
27	20.32	33.83	4.96	410	20	20.31	33.84	5.00	23.81	410	0.08
36	19.08	33.80	4.87	382	30	20.32	33.83	4.96	23.80	410	0.12
50	17.64	33.80	5.02	348	50	17.64	33.80	5.02	24.46	348	0.20
62	16.06	33.75	5.20	316	75	15.10	33.90	3.55	25.12	285	0.28
84	15.28	34.10	2.86	274	100	14.68	34.18	2.39	25.43	256	0.35
100	14.68	34.18	2.39	256	125	13.50	34.20	2.13	25.69	231	0.41
117	13.54	34.17	2.14	234	150	10.95	34.11	2.05	26.11	191	0.46
134	11.94	34.13	2.09	207	200	10.50	34.33	1.20	26.36	167	0.55
158	10.73	34.11	2.01	187	250	9.87	34.38	1.05	26.51	153	0.64
188	10.50	34.28	1.40	171	300	8.97	34.36	0.86	26.64	141	0.71
213	10.47	34.37	1.00	164	400	8.11	34.42	0.46	26.83	123	0.85
257	9.72	34.38	1.04	151	500	6.89	34.39	0.39	26.98	109	0.97
305	8.90	34.36	0.84	140							
381	8.32	34.42	0.49	126							
462	7.31	34.40	0.42	114							
544	6.48	34.38	0.35	104							
117.60	BLACK DOUGLAS; October 27, 1959; 1311 GCT; 27°48'N, 116°53'W; sounding, 1800 fm; wind, 280°, force 3; weather, overcast; sea, rough; wire angle, 07°.										
0	21.92	34.08	4.99	434	0	21.92	34.08	4.99	23.56	434	0.00
10	21.92	34.07	4.85	434	10	21.92	34.07	4.85	23.56	434	0.04
30	21.92	34.07	4.78	434	20	21.92	34.07	4.82	23.56	434	0.09
60	16.62	33.78	4.82	326	30	21.92	34.07	4.78	23.56	434	0.13
70	14.78	33.75	4.75	290	50	18.65	33.87	4.80	24.27	366	0.21
85	12.52	33.72	3.92	248	75	14.23	33.74	4.61	25.18	279	0.29
100	11.30	33.81	3.27	219	100	11.30	33.81	3.27	25.82	219	0.36
115	10.99	33.91	2.65	206	125	10.62	33.94	2.60	26.04	198	0.41
140	10.14	33.98	2.55	187	150	10.17	34.05	2.18	26.21	182	0.46
160	10.22	34.13	1.84	177	200	9.74	34.24	1.39	26.42	162	0.54
190	9.81	34.20	1.51	166	250	9.29	34.40	0.87	26.63	142	0.62
221	9.64	34.34	1.06	152	300	8.80	34.43	0.70	26.73	133	0.69
251	9.28	34.40	0.87	142	400	7.81	34.42	0.37	26.87	119	0.82
300	8.80	34.43	0.70	133	500	6.68	34.43	0.27	27.04	104	0.94
355	8.31	34.43	0.51	126	600	5.73	34.42	0.27	27.15	92	1.04
439	7.36	34.42	0.31	113							
524	6.41	34.43	0.26	100							
608	5.69	34.42	0.28	92							
117.70	BLACK DOUGLAS; October 27, 1959; 1752 GCT; 27°30'N, 117°32.5'W; sounding, 1920 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 14°.										
0	20.23	33.84	5.01	407	0	20.23	33.84	5.01	23.84	407	0.00
10	20.25	33.86	4.91	406	10	20.25	33.86	4.91	23.85	406	0.04
29	20.25	33.82	5.05	410	20	20.25	33.84	4.97	23.83	408	0.08
39	20.04	33.80	5.04	406	30	20.25	33.82	5.05	23.82	410	0.12
54	18.08	33.70	5.40	366	50	19.00	33.74	5.25	24.08	384	0.20
68	16.17	33.59	5.38	330	75	15.39	33.63	5.28	24.86	310	0.29
92	14.63	33.77	5.10	285	100	14.35	33.75	5.08	25.17	280	0.36
111	12.93	33.65	4.98	260	125	11.80	33.64	4.48	25.59	240	0.43
130	11.42	33.63	4.31	235	150	10.26	33.68	3.71	25.90	211	0.49
149	10.32	33.68	3.74	212	200	8.91	33.84	3.01	26.25	178	0.59
177	9.42	33.76	3.40	192	250	8.29	34.09	2.03	26.54	150	0.67
211	8.72	33.90	2.77	171	300	8.04	34.21	1.31	26.67	138	0.75
239	8.36	34.06	2.27	154	400	7.27	34.33	0.63	26.87	119	0.88
286	8.16	34.17	1.49	143	500	6.35	34.31	0.41	26.98	108	1.00
337	7.68	34.28	1.00	128	600	(5.84)	(34.41)		(27.13)	(95)	(1.11)
418	7.16	34.33	0.55	117							
500	6.35	34.31	0.41	108							
585	5.90	34.39	0.28	97							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; October 27, 1959; 2225 GCT; 27°12'N, 118°10.5'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 07°. 117.80

0	20.40	34.00	4.73	400	0	20.40	34.00	4.73	23.92	400	0.00
10	20.43	34.00	4.94	401	10	20.43	34.00	4.94	23.91	401	0.04
30	20.44	34.04	4.96	398	20	20.44	34.03	4.95	23.92	400	0.08
61	18.06	33.82	5.44	356	30	20.44	34.04	4.96	23.94	398	0.12
71	17.56	33.78	5.50	347	50	20.44	34.04	4.97	23.94	398	0.20
86	16.58	33.85	5.38	320	75	17.10	33.77	5.49	24.58	337	0.29
100	14.40	33.69	4.99	286	100	14.40	33.69	4.99	25.11	286	0.37
115	12.87	33.69	4.42	256	125	11.95	33.75	3.98	25.65	235	0.44
141	10.84	33.77	3.57	214	150	10.59	33.81	3.37	25.94	207	0.49
160	10.40	33.84	3.17	202	200	9.73	34.02	2.38	26.25	178	0.59
190	9.83	33.98	2.53	182	250	9.54	34.26	1.39	26.47	157	0.68
220	9.60	34.11	1.97	169	300	9.00	34.27	1.21	26.57	148	0.76
250	9.54	34.26	1.39	157	400	7.92	34.29	0.86	26.75	130	0.90
299	9.01	34.27	1.21	148	500	6.89	34.31	0.47	26.92	114	1.03
354	8.51	34.31	0.97	137	600	6.02	34.36	0.35	27.06	101	1.14
439	7.45	34.28	0.75	125							
523	6.68	34.33	0.39	111							
608	5.96	34.36	0.34	100							

BLACK DOUGLAS; October 28, 1959; 0313 GCT; 26°48'N, 118°50.5'W; sounding, 2200 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 10°. 117.90

0	20.65	34.02	5.07	405	0	20.65	34.02	5.07	23.87	405	0.00
10	20.68	34.02	5.16	406	10	20.68	34.02	5.16	23.85	406	0.04
30	20.70	34.00	5.10	408	20	20.69	34.01	5.15	23.85	406	0.08
54	18.90	33.89	5.50	371	30	20.70	34.00	5.10	23.84	408	0.12
64	18.18	33.89	5.49	354	50	20.70	34.00	5.10	23.84	408	0.20
74	17.50	33.84	5.47	342	75	17.47	33.84	5.47	24.53	342	0.30
88	16.20	33.75	5.47	320	100	15.00	33.68	5.28	24.98	299	0.38
104	14.92	33.69	5.24	296	125	13.13	33.71	4.71	25.38	260	0.45
129	12.74	33.71	4.56	252	150	11.41	33.73	3.97	25.73	227	0.51
148	11.50	33.73	4.00	228	200	9.96	34.02	2.71	26.22	181	0.62
173	10.41	33.79	3.41	206	250	9.48	34.22	1.68	26.46	158	0.70
202	9.93	34.04	2.65	179	300	9.00	34.33	1.17	26.61	144	0.78
232	9.62	34.16	1.92	166	400	7.69	34.34	0.92	26.82	124	0.92
271	9.30	34.29	1.44	151	500	6.80	34.40	0.40	27.00	107	1.04
331	8.66	34.34	0.98	137							
405	7.63	34.34	0.92	123							
480	6.96	34.40	0.45	109							
558	6.28	34.38	0.34	102							

BLACK DOUGLAS; October 26, 1959; 1143 GCT; 28°18.5'N, 115°23.5'W; sounding, 140 fm; wind, 300°, force 4; weather, overcast; sea, very rough; wire angle, 06°. 118.39

0	19.97	33.75	5.16	408	0	19.97	33.75	5.16	23.84	408	0.00
10	19.78	33.71	5.18	406	10	19.78	33.71	5.18	23.86	406	0.04
30	17.18	33.64	5.25	349	20	18.90	33.67	5.22	24.06	386	0.08
50	14.92	33.62	4.78	302	30	17.18	33.64	5.25	24.45	349	0.12
75	13.19	33.71	3.89	261	50	14.92	33.62	4.78	24.94	302	0.18
99	12.42	33.82	3.13	239	75	13.19	33.71	3.89	25.38	261	0.25
124	12.02	34.02	2.25	216	100	12.43	33.83	3.10	25.62	238	0.32
154	10.86	34.17	1.69	185	125	12.00	34.03	2.24	25.85	216	0.37
					150	11.05	34.15	1.75	26.12	190	0.42

BLACK DOUGLAS; October 25, 1959; 1520 GCT; 28°19'N, 114°53'W; sounding, 60 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 12°. 119.33

0	20.89	33.78	4.79	428	0	20.89	33.78	4.79	23.62	428	0.00
10	20.90	33.78	4.94	428	10	20.90	33.78	4.94	23.62	428	0.04
29	20.89	33.78	4.79	428	20	20.89	33.78	4.86	23.62	428	0.09
49	20.62	33.78	4.77	421	30	20.89	33.78	4.78	23.62	428	0.13
73	14.91	33.64	3.91	300	50	20.60	33.78	4.78	23.69	421	0.21
					75	(14.89)	(33.65)	(3.89)	(24.98)	(298)	(0.30)

SIO

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
120.25 BLACK DOUGLAS; October 25, 1959; 1948 GCT; 28°22.5'N, 114°15'W; sounding, 30 fm; wind, 310°, force 6; weather, cloudy; sea, very rough; wire angle, 03°.											
2	20.14	33.78	5.11	410	0	(20.14)	(33.78)	(5.11)	(23.82)	(410)	(0.00)
12	20.16	33.79	5.04	409	10	20.15	33.79	5.04	23.82	410	0.04
32	16.80	33.77	4.60	331	20	20.16	33.79	5.04	23.82	410	0.08
42	15.78	33.74	4.62	311	30	17.25	33.77	4.63	24.54	341	0.12
120.30 BLACK DOUGLAS; October 25, 1959; 1727 GCT; 28°13'N, 114°34'W; sounding, 50 fm; wind, 300°, force 6; weather, cloudy; sea, rough; wire angle, 15°.											
0	20.94	33.77	4.91	430	0	20.94	33.77	4.91	23.60	430	0.00
10	20.96	33.78	4.84	430	10	20.96	33.78	4.84	23.60	430	0.04
29	20.95	33.78	4.78	430	20	20.96	33.78	4.81	23.60	430	0.09
48	20.70	33.77	4.64	424	30	20.94	33.78	4.77	23.60	430	0.13
73	15.88	33.84	4.33	306	50	20.60	33.77	4.63	23.68	422	0.21
					75	(15.78)	(33.84)	(4.32)	(24.93)	(304)	(0.30)
120.35 BLACK DOUGLAS; October 25, 1959; 1252 GCT; 28°03'N, 114°54'W; sounding, 46 fm; wind, variable, force 4; weather, clear; sea, moderate; wire angle, 02°.											
0	20.82	33.80	4.90	425	0	20.82	33.80	4.90	23.65	425	0.00
10	20.83	33.81	4.96	425	10	20.83	33.81	4.96	23.65	425	0.04
30	20.83	33.82	4.96	424	20	20.83	33.82	4.96	23.66	424	0.08
40	20.38	33.80	4.64	414	30	20.83	33.82	4.96	23.66	424	0.13
50	19.36	33.78	4.76	390	50	19.36	33.78	4.76	24.02	390	0.21
75	14.55	33.71	3.56	288	75	14.55	33.71	3.56	25.10	288	0.29
120.45 BLACK DOUGLAS; October 24, 1959; 2112 GCT; 27°43'N, 115°33'W; sounding, 1150 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.											
0	20.32	34.00	5.01	398	0	20.32	34.00	5.01	23.94	398	0.00
10	20.00	34.02	5.12	388	10	20.00	34.02	5.12	24.03	388	0.04
30	19.44	33.98	5.11	378	20	19.97	34.02	5.11	24.04	388	0.08
40	17.34	33.86	5.02	337	30	19.44	33.98	5.11	24.14	378	0.12
49	16.30	33.75	5.14	322	50	16.23	33.75	5.14	24.76	320	0.19
64	15.18	33.81	4.66	293	75	13.86	33.77	4.28	25.28	270	0.26
79	13.33	33.75	4.08	260	100	12.53	33.84	3.12	25.60	239	0.32
99	12.55	33.84	3.15	240	125	11.50	33.98	2.55	25.91	210	0.38
124	11.52	33.98	2.56	210	150	11.31	34.18	1.88	26.10	192	0.43
144	11.42	34.16	2.00	196	200	11.20	34.51	0.61	26.38	166	0.52
173	10.66	34.22	1.43	178	250	9.83	34.42	0.84	26.55	150	0.60
202	11.20	34.52	0.59	165	300	9.20	34.43	0.67	26.66	139	0.68
232	10.23	34.42	0.85	156	400	8.09	34.43	0.32	26.84	122	0.82
271	9.52	34.42	0.80	144	500	6.77	34.42	0.21	27.02	105	0.93
330	8.89	34.43	0.54	134							
405	8.02	34.43	0.31	122							
478	7.00	34.42	0.22	108							
558	6.21	34.42	0.20	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

BLACK DOUGLAS; October 24, 1959; 1822 GCT; 27°33'N, 115°52.5'W; sounding, 2150 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 00°. 120.50

0	21.86	34.05	4.68	434	0	21.86	34.05	4.68	23.56	434	0.00
10	21.79	34.11	4.78	428	10	21.79	34.11	4.78	23.62	428	0.04
30	21.71	34.06	4.82	430	20	21.74	34.09	4.80	23.61	429	0.09
40	18.43	33.62	5.11	380	30	21.71	34.06	4.82	23.60	430	0.13
50	16.87	33.68	5.10	339	50	16.87	33.68	5.11	24.56	339	0.21
66	15.76	33.69	5.28	314	75	14.82	33.78	4.82	25.09	288	0.28
81	14.36	33.82	4.46	276	100	12.16	33.83	3.31	25.67	233	0.35
100	12.16	33.83	3.31	233	125	10.75	33.89	3.33	25.98	204	0.41
127	10.72	33.89	3.33	204	150	10.66	34.11	2.03	26.17	186	0.46
146	10.70	34.08	2.21	189	200	9.89	34.31	1.33	26.46	158	0.54
176	10.20	34.24	1.57	169	250	9.60	34.45	0.79	26.61	144	0.62
207	9.84	34.34	1.24	156	300	8.71	34.40	0.65	26.71	134	0.69
236	9.78	34.45	0.82	146	400	7.84	34.40	0.37	26.85	121	0.82
276	9.02	34.40	0.74	139	500	6.73	34.40	0.23	27.01	106	0.94
336	8.36	34.40	0.52	128							
412	7.74	34.40	0.35	120							
487	6.84	34.40	0.24	108							
567	6.28	34.40	0.18	100							

BLACK DOUGLAS; October 24, 1959; 1214 GCT; 27°10'N, 116°38'W; sounding, 2000 fm; wind, 310°, force 3; weather, clear; sea, rough; wire angle, 08°. 120.60

0	22.12	34.05	4.41	442	0	22.12	34.05	4.41	23.48	442	0.00
10	22.14	34.05	4.58	442	10	22.14	34.05	4.58	23.48	442	0.04
30	20.58	33.89	4.64	412	20	22.14	34.05	4.59	23.48	442	0.09
39	16.82	33.71	4.88	336	30	20.58	33.89	4.64	23.78	412	0.13
49	14.61	33.69	4.47	290	50	14.40	33.69	4.41	25.11	286	0.20
64	12.68	33.73	3.68	250	75	12.12	33.82	3.14	25.67	232	0.27
78	11.96	33.83	3.06	229	100	10.97	33.84	2.97	25.90	211	0.32
99	10.98	33.84	2.97	211	125	10.61	34.04	2.16	26.12	190	0.37
125	10.61	34.04	2.16	190	150	10.19	34.13	2.00	26.27	176	0.42
144	10.26	34.11	2.12	180	200	9.44	34.23	1.33	26.46	158	0.50
173	9.92	34.20	1.52	167	250	9.25	34.39	0.75	26.63	142	0.58
203	9.42	34.23	1.32	157	300	8.82	34.42	0.55	26.71	134	0.65
232	9.34	34.34	0.90	148	400	7.49	34.36	0.40	26.86	120	0.78
272	9.10	34.42	0.64	138	500	6.83	34.40	0.25	27.00	107	0.90
332	8.42	34.40	0.48	130							
406	7.43	34.36	0.40	119							
480	6.98	34.40	0.27	109							
560	6.30	34.41	0.23	100							

BLACK DOUGLAS; October 24, 1959; 0717 GCT; 26°52'N, 117°13'W; sounding, 2050 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 07°. 120.70

0	20.19	33.75	4.34	413	0	20.19	33.75	4.34	23.78	413	0.00
10	20.20	33.77	4.44	412	10	20.20	33.77	4.44	23.79	412	0.04
30	20.04	33.80	4.47	406	20	20.12	33.79	4.46	23.82	408	0.08
40	19.40	33.86	4.73	385	30	20.04	33.80	4.47	23.86	406	0.12
50	18.39	33.86	4.88	361	50	18.39	33.86	4.88	24.32	361	0.20
64	16.10	33.47	5.68	338	75	16.02	33.70	5.28	24.77	319	0.28
79	16.16	33.78	5.22	316	100	14.50	33.79	4.82	25.16	281	0.36
98	14.76	33.80	4.86	285	125	12.32	33.65	4.68	25.50	249	0.43
124	12.38	33.65	4.69	250	150	10.82	33.79	3.48	25.88	213	0.49
144	11.01	33.75	3.65	218	200	9.73	34.03	2.28	26.26	177	0.59
173	10.25	33.95	2.91	191	250	9.07	34.21	1.62	26.50	154	0.67
203	9.68	34.04	2.23	175	300	8.61	34.30	1.10	26.65	140	0.75
232	9.36	34.18	1.69	160	400	7.74	34.34	0.52	26.82	124	0.88
272	8.76	34.23	1.52	147	500	6.50	34.34	0.40	26.98	108	1.01
332	8.47	34.34	0.77	134							
406	7.67	34.34	0.50	123							
480	6.64	34.33	0.42	110							
560	6.24	34.41	0.29	100							

S10

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

120.80 BLACK DOUGLAS; October 24, 1959; 0215 GCT; 26°34'N, 117°49'W; sounding, 1800 fm; wind, 340°, force 3; weather, clear; sea, rough; wire angle, 03°.

0	20.86	33.91	5.00	418	0	20.86	33.91	5.00	23.72	418	0.00
10	20.52	33.91	5.05	410	10	20.52	33.91	5.05	23.81	410	0.04
30	20.48	33.93	5.10	407	20	20.50	33.92	5.08	23.83	408	0.08
40	20.37	33.97	5.14	402	30	20.48	33.93	5.10	23.84	407	0.12
50	18.68	33.90	5.46	365	50	18.68	33.90	5.46	24.28	365	0.20
65	17.72	33.89	5.47	343	75	16.90	33.76	5.56	24.61	334	0.29
81	16.14	33.65	5.65	326	100	15.00	33.69	5.30	24.98	298	0.37
101	14.88	33.69	5.25	296	125	12.18	33.66	4.33	25.53	246	0.44
126	12.12	33.66	4.31	244	150	11.17	33.75	3.77	25.79	221	0.50
146	11.35	33.73	3.87	226	200	10.02	34.03	2.27	26.22	181	0.60
176	10.26	33.84	3.07	200	250	9.62	34.29	1.41	26.48	156	0.69
207	9.98	34.09	2.07	176	300	8.97	34.37	1.07	26.65	140	0.76
237	9.76	34.25	1.60	161	400	7.85	34.43	0.42	26.87	119	0.90
276	9.29	34.34	1.12	147	500	6.70	34.40	0.30	27.01	106	1.02
337	8.54	34.40	1.00	131							
412	7.72	34.43	0.36	118							
487	6.82	34.40	0.32	108							
566	6.24	34.42	0.25	98							

120.90 BLACK DOUGLAS; October 23, 1959; 2125 GCT; 26°13'N, 118°27'W; sounding, 2200 fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 00°.

0	21.25	34.04	5.10	419	0	21.25	34.04	5.10	23.72	419	0.00
10	21.03	34.07	4.87	411	10	21.03	34.07	4.87	23.80	411	0.04
30	20.98	34.05	4.95	411	20	21.00	34.06	4.93	23.80	411	0.08
56	18.93	33.89	5.40	372	30	20.98	34.05	4.95	23.80	411	0.12
65	17.94	33.88	5.41	349	50	19.87	33.96	5.22	24.02	390	0.20
75	16.80	33.86	5.34	325	75	16.80	33.86	5.34	24.71	325	0.29
91	16.08	33.91	5.23	305	100	14.85	33.84	5.07	25.13	284	0.37
106	14.17	33.80	4.93	273	125	12.55	33.71	4.53	25.50	249	0.44
132	11.78	33.69	4.26	236	150	10.85	33.76	3.73	25.86	215	0.50
152	10.76	33.77	3.67	213	200	9.83	34.02	2.45	26.24	179	0.60
176	9.94	33.87	2.98	192	250	9.32	34.27	1.52	26.52	152	0.68
207	9.79	34.07	2.33	175	300	8.86	34.37	0.90	26.67	138	0.76
237	9.42	34.23	1.81	157	400	7.59	34.34	0.68	26.84	122	0.89
277	9.12	34.34	1.09	144	500	6.40	34.34	0.42	27.01	106	1.01
337	8.42	34.38	0.77	131							
413	7.41	34.34	0.65	120							
487	6.54	34.34	0.45	108							
567	5.79	34.34	0.32	99							

123.37 BLACK DOUGLAS; October 22, 1959; 1244 GCT; 27°24'N, 114°40'W; sounding, 40 fm; wind, 280°, force 2; weather, clear; sea, slight; wire angle, 00°.

0	20.50	34.08	5.18	397	0	20.50	34.08	5.18	23.95	397	0.00
10	20.36	34.04	5.26	396	10	20.36	34.04	5.26	23.96	396	0.04
30	17.24	33.76	5.46	342	20	19.88	33.99	5.33	24.04	388	0.08
50	17.10	34.14	3.38	311	30	17.24	33.76	5.46	24.52	342	0.12
					50	17.10	34.14	3.38	24.85	311	0.18

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; October 22, 1959; 1800 GCT; 27°14'N, 114°59'W; sounding, 780 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 02°. 123.42

0	22.74	34.26	5.09	443	0	22.74	34.26	5.09	23.47	443	0.00
9	22.64	34.24	4.86	441	10	22.63	34.24	4.86	23.49	441	0.04
29	18.96	33.95	5.03	368	20	22.41	34.22	4.87	23.53	437	0.09
39	17.26	33.94	4.98	329	30	18.70	33.95	5.03	24.31	362	0.13
53	14.79	33.75	4.42	293	50	15.00	33.76	4.48	25.04	293	0.19
68	13.73	33.77	4.07	267	75	13.17	33.77	3.90	25.43	256	0.26
93	12.04	33.78	3.54	235	100	11.91	33.79	3.40	25.69	231	0.32
114	12.92	34.23	1.84	217	125	11.45	34.00	2.15	25.93	208	0.38
134	11.93	34.22	1.96	200	150	12.84	34.56	0.83	26.10	192	0.43
154	12.92	34.60	0.60	190	200	11.03	34.46	0.80	26.36	167	0.52
184	11.38	34.43	0.89	175	250	9.88	34.43	0.87	26.54	150	0.60
220	10.65	34.50	0.69	157	300	9.16	34.44	0.70	26.67	138	0.68
250	9.88	34.43	0.87	150	400	7.68	34.33	0.59	26.82	124	0.81
300	9.16	34.44	0.70	138	500	7.03	34.41	0.32	26.97	110	0.94
354	8.18	34.35	0.67	130							
439	7.40	34.36	0.46	118							
524	6.92	34.45	0.24	105							

BLACK DOUGLAS; October 23, 1959; 0040 GCT; 27°00'N, 115°31'W; sounding, 2000 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 07°. 123.50

0	21.92	34.13	4.45	430	0	21.92	34.13	4.45	23.60	430	0.00
10	21.92	34.09	4.49	433	10	21.92	34.09	4.49	23.57	433	0.04
30	21.62	34.14	4.60	422	20	21.80	34.11	4.57	23.62	428	0.09
40	20.42	33.97	4.51	403	30	21.62	34.14	4.60	23.69	422	0.13
50	17.84	33.80	5.04	353	50	17.84	33.80	5.04	24.41	353	0.21
65	16.11	33.78	5.21	315	75	14.70	33.76	4.83	25.09	287	0.29
81	14.14	33.75	4.56	276	100	12.48	33.78	3.74	25.56	243	0.35
100	12.48	33.78	3.74	243	125	11.34	33.95	2.71	25.92	209	0.41
125	11.34	33.95	2.71	209	150	10.67	34.13	2.11	26.16	186	0.46
145	10.81	34.12	2.15	188	200	9.61	34.24	1.55	26.45	159	0.55
175	9.94	34.16	1.88	171	250	9.48	34.39	0.98	26.59	146	0.63
205	9.59	34.27	1.43	157	300	8.83	34.40	0.80	26.69	136	0.70
235	9.60	34.36	1.11	150	400	7.64	34.40	0.46	26.87	119	0.83
275	9.18	34.40	0.89	141	500	6.85	34.45	0.26	27.03	104	0.95
335	8.37	34.40	0.61	129							
410	7.55	34.40	0.44	117							
486	7.01	34.45	0.28	106							
566	6.15	34.42	0.20	97							

BLACK DOUGLAS; October 23, 1959; 0633 GCT; 26°38.5'N, 116°09'W; sounding, 1980 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 04°. 123.60

0	22.30	34.13	4.81	440	0	22.30	34.13	4.81	23.50	440	0.00
10	22.32	34.12	4.78	442	10	22.32	34.12	4.78	23.48	442	0.04
40	22.17	34.06	4.56	442	20	22.28	34.10	4.71	23.48	442	0.09
45	18.54	33.76	5.04	372	30	22.22	34.08	4.64	23.48	442	0.13
50	16.94	33.73	5.08	337	50	16.94	33.73	5.08	24.58	337	0.21
55	15.15	33.69	4.96	301	75	12.80	33.72	3.88	25.46	253	0.28
65	13.85	33.71	4.32	274	100	11.63	33.96	2.40	25.87	214	0.34
81	12.25	33.73	3.62	242	125	11.18	34.22	1.51	26.15	187	0.40
101	11.64	33.96	2.39	214	150	10.60	34.29	1.42	26.31	172	0.44
126	11.19	34.22	1.51	187	200	10.06	34.42	0.92	26.51	153	0.52
145	10.64	34.26	1.48	175	250	9.31	34.40	0.88	26.62	142	0.60
175	10.49	34.40	0.98	162	300	8.59	34.42	0.79	26.75	130	0.67
205	9.96	34.42	0.90	152	400	7.70	34.44	0.39	26.90	116	0.80
274	8.98	34.40	0.83	138	500	6.57	34.40	0.37	27.03	104	0.91
334	8.12	34.45	0.70	121							
410	7.63	34.60r	0.34								
485	6.72	34.40	0.38	106							
564	6.03	34.41	0.29	97							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
123.70	BLACK DOUGLAS; October 23, 1959; 1113 GCT; 26°19'N, 116°47'W; sounding, 2000 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 08°.										
0	20.60	33.84	4.91	416	0	20.60	33.84	4.91	23.75	416	0.00
10	20.64	33.84	4.87	418	10	20.64	33.84	4.87	23.73	418	0.04
30	20.38	34.04	5.10	397	20	20.63	33.86	4.88	23.75	416	0.08
40	18.98	33.85	5.34	376	30	20.38	34.04	5.10	23.95	397	0.12
50	17.90	33.84	5.46	351	50	17.90	33.84	5.46	24.43	351	0.20
65	16.20	33.68	5.60	324	75	15.50	33.73	5.47	24.90	306	0.28
80	15.30	33.74	5.40	301	100	13.54	33.69	4.90	25.29	269	0.36
100	13.54	33.69	4.90	269	125	11.37	33.69	4.18	25.71	229	0.42
125	11.37	33.69	4.18	229	150	10.63	33.88	3.07	25.99	202	0.47
145	10.70	33.84	3.28	207	200	10.29	34.28	1.45	26.36	168	0.57
175	10.42	34.11	2.12	182	250	9.40	34.30	1.41	26.52	152	0.65
205	10.23	34.29	1.39	166	300	8.86	34.37	0.98	26.66	139	0.72
235	9.60	34.29	1.49	156	400	7.58	34.40	0.86	26.89	117	0.86
275	9.13	34.33	1.17	146	500	6.61	34.34	0.37	26.97	109	0.98
335	8.44	34.40	0.85	130							
409	7.46	34.40	0.85	116							
483	6.74	34.34	0.40	111							
563	6.13	34.39	0.36	99							
127.34	BLACK DOUGLAS; October 22, 1959; 0732 GCT; 26°55'N, 114°06.5'W; sounding, 40 fm; wind, 360°, force 6; weather, clear; sea, rough; wire angle, 05°.										
0	21.28	34.20	4.81	408	0	21.28	34.20	4.81	23.83	408	0.00
10	21.30	34.18	4.89	410	10	21.30	34.18	4.89	23.81	410	0.04
30	21.10	34.16	4.84	406	20	21.28	34.18	4.88	23.81	410	0.08
35	20.86	34.20	4.76	397	30	21.10	34.16	4.84	23.85	406	0.12
40	19.08	34.05	4.87	364	50	17.44	33.95	4.68	24.63	332	0.20
50	17.44	33.95	4.68	332							
127.40	BLACK DOUGLAS; October 22, 1959; 0404 GCT; 26°43.5'N, 114°29'W; sounding, 1700 fm; wind, 330°, force 6; weather, clear; sea, very rough; wire angle, 17°.										
2	22.62	34.31	4.82	436	0	(22.62)	(34.31)	(4.82)	(23.54)	(436)	(0.00)
10	22.38	34.25	4.94	431	10	22.38	34.25	4.94	23.59	431	0.04
30	20.70	34.11	4.88	400	20	21.70	34.20	4.93	23.72	419	0.09
39	18.92	34.04	4.72	361	30	20.70	34.11	4.88	23.92	400	0.13
55	17.06	34.10	3.94	313	50	17.89	34.08	4.34	24.62	333	0.20
68	15.73	34.15	2.96	280	75	15.06	34.13	2.66	25.30	268	0.28
92	13.53	34.16	2.10	234	100	13.14	34.24	1.55	25.80	221	0.34
111	13.67	34.52	0.99	210	125	13.56	34.59	0.73	25.98	203	0.39
129	13.50	34.61	-	200	150	12.93	34.62	0.58	26.13	189	0.44
148	12.95	34.62	0.57	189	200	10.73	34.42	0.92	26.40	164	0.53
176	11.07	34.33	1.31	177	250	10.07	34.49	0.63	26.56	148	0.61
208	10.63	34.45	0.82	161	300	9.28	34.49	0.45	26.69	136	0.68
235	10.30	34.49	0.65	152	400	8.02	34.43	0.30	26.84	122	0.82
281	9.57	34.49	0.54	140	500	7.04	34.43	0.17	26.99	108	0.94
333	8.86	34.48	0.35	130							
414	7.86	34.42	0.28	120							
495	7.08	34.43	0.18	109							
578	6.32	34.44	0.17	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_{T_3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; October 21, 1959; 2212 GCT; 26°23'N, 115°09.5'W; sounding, 1900 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°. 127.50

0	22.41	34.13	4.81	443	0	22.41	34.13	4.81	23.46	443	0.00
10	22.40	34.14	4.82	442	10	22.40	34.14	4.82	23.48	442	0.04
29	20.89	33.96	4.98	415	20	21.59	34.09	4.93	23.65	425	0.09
38	19.48	33.92	5.35	383	30	20.80	33.95	5.00	23.77	414	0.13
54	18.07	33.82	5.35	356	50	18.55	33.85	5.36	24.27	366	0.21
68	16.66	33.94	5.14	316	75	16.02	33.93	4.98	24.94	302	0.29
92	13.66	33.86	3.69	259	100	13.05	33.93	3.14	25.58	242	0.36
110	12.66	33.98	2.79	231	125	12.37	34.12	2.47	25.85	216	0.42
129	11.72	34.14	2.19	202	150	11.09	34.18	1.93	26.14	188	0.47
148	11.11	34.18	1.94	188	200	10.21	34.39	1.10	26.46	158	0.56
177	10.81	34.31	1.49	174	250	9.31	34.51	0.55	26.70	135	0.63
210	9.91	34.42	0.93	151	300	8.77	34.49	0.46	26.78	128	0.70
238	9.46	34.51	0.59	137	400	7.79	34.45	0.29	26.90	116	0.83
286	8.92	34.49	0.48	130	500	6.98	34.43	0.20	26.99	108	0.95
338	8.35	34.49	0.39	122	600	(6.17)					
420	7.65	34.45	0.27	115							
503	6.96	34.43	0.20	107							
587	6.27	-	-								

BLACK DOUGLAS; October 21, 1959; 1647 GCT; 26°03.5'N, 115°46.5'W; sounding, 2000 fm; wind, 330°, force 3; weather, cloudy; sea, moderate; wire angle, 20°. 127.60

0	21.63	33.99	4.84	433	0	21.63	33.99	4.84	23.57	433	0.00
9	21.62	33.98	4.82	433	10	21.62	33.98	4.83	23.57	433	0.04
28	21.62	33.98	4.88	433	20	21.62	33.98	4.85	23.57	433	0.09
37	19.63	33.86	5.45	391	30	21.50	33.97	4.96	23.59	431	0.13
46	17.82	33.71	5.17	359	50	17.40	33.70	5.26	24.44	350	0.21
60	16.80	33.70	5.45	336	75	15.72	33.75	5.44	24.88	308	0.29
75	15.72	33.75	5.44	308	100	13.32	33.75	4.26	25.38	260	0.36
93	13.85	33.73	4.50	272	125	11.95	33.91	3.26	25.78	223	0.42
116	12.28	33.85	3.73	234	150	11.35	34.11	2.10	26.04	198	0.48
133	11.72	33.98	2.70	214	200	10.70	34.41	1.04	26.38	165	0.57
161	11.17	34.22	1.75	187	250	10.46	34.62	0.41	26.60	145	0.65
188	10.71	34.32	1.36	172	300	10.02	34.61	0.33	26.67	138	0.72
215	10.76	34.52	0.68	158	400	8.52	34.53	0.33	26.85	121	0.86
250	10.46	34.62	0.41	145	500	7.11	34.43	0.60	26.98	109	0.98
305	9.96	34.61	0.32	137							
376	9.00	34.60	0.27	123							
447	7.54	34.42	0.51	116							
524	6.92	34.45	0.63	105							

BLACK DOUGLAS; October 21, 1959; 1203 GCT; 25°44'N, 116°24.5'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 10°. 127.70

0	22.76	34.25	4.84	444	0	22.76	34.25	4.81	23.45	444	0.00
10	22.80	34.27	4.89	444	10	22.80	34.27	4.89	23.45	444	0.04
29	22.80	34.27	4.96	444	20	22.80	34.27	4.94	23.46	443	0.09
39	21.34	34.27	5.38	405	30	22.80	34.27	4.96	23.46	443	0.13
49	20.21	34.20	5.50	381	50	20.10	34.19	5.50	24.15	378	0.22
64	18.32	34.08	5.45	343	75	17.41	34.08	5.29	24.73	322	0.30
79	17.05	34.08	5.20	314	100	13.88	33.82	4.36	25.32	266	0.38
99	13.94	33.82	4.40	267	125	12.15	33.81	3.70	25.66	234	0.44
124	12.18	33.81	3.71	235	150	10.88	33.89	3.14	25.95	206	0.50
144	11.02	33.86	3.25	211	200	10.17	34.19	1.80	26.31	172	0.59
174	10.31	34.02	2.51	187	250	9.82	34.40	1.07	26.52	152	0.68
204	10.14	34.23	1.64	169	300	9.21	34.42	0.73	26.65	140	0.75
234	9.95	34.36	1.24	156	400	7.91	34.42	0.38	26.85	121	0.89
273	9.62	34.43	0.82	146	500	7.18	34.46	0.23	27.00	107	1.01
332	8.70	34.40	0.68	133							
406	7.86	34.42	0.37	120							
479	7.36	34.47	0.23	109							
559	6.52	34.43	0.26	101							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
130.30	BLACK DOUGLAS; October 20, 1959; 0919 GCT; 26°29'N, 113°29'W; sounding, 46 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 03°.										
0	23.56	34.34	4.69	459	0	23.56	34.34	4.69	23.30	459	0.00
10	23.57	34.34	4.57	459	10	23.57	34.34	4.57	23.30	459	0.05
30	21.84	34.13	5.05	428	20	22.65	34.22	4.83	23.45	444	0.09
50	18.72	33.98	5.15	360	30	21.84	34.13	5.05	23.62	428	0.13
75	16.24	34.29	2.15	281	50	18.72	33.98	5.15	24.34	360	0.21
					75	16.24	34.29	2.15	25.16	281	0.29
130.35	BLACK DOUGLAS; October 20, 1959; 1150 GCT; 26°19'N, 113°48'W; sounding, 195 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 12°.										
0	25.64	34.63	4.56	498	0	25.64	34.63	4.56	22.89	498	0.00
10	25.66	34.61	4.60	500	10	25.66	34.61	4.60	22.87	500	0.05
30	25.67	34.67	4.56	496	20	25.66	34.63	4.58	22.88	499	0.10
49	19.23	34.00	4.60	371	30	25.67	34.67	4.56	22.91	496	0.15
73	15.64	33.96	4.17	292	50	19.10	34.00	4.60	24.24	369	0.24
98	14.50	34.31	1.92	243	75	15.36	33.98	4.01	25.12	285	0.32
122	12.60	34.27	1.64	209	100	14.38	34.31	1.87	25.60	240	0.38
162	11.99	34.58	0.50	175	125	12.56	34.31	1.57	25.96	205	0.44
201	11.38	34.60	0.40	162	150	12.18	34.51	0.78	26.20	183	0.49
251	10.36	34.54	0.48	149	200	11.41	34.60	0.40	26.41	163	0.58
					250	10.38	34.54	0.48	26.54	150	0.66
130.40	BLACK DOUGLAS; October 20, 1959; 1446 GCT; 26°08'N, 114°08.5'W; sounding, 1100 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 18°.										
0	25.62	34.60		499	0	25.62	34.60		22.88	499	0.00
9	25.64	34.58		502	10	25.64	34.58		22.85	502	0.05
33	21.30	34.06		419	20	25.62	34.58		22.86	501	0.10
39	20.08	34.04		389	30	23.60	34.30		23.26	463	0.15
44	19.28	34.09		365	50	18.13	34.08		24.56	339	0.23
72	14.80	33.99		272	75	14.80	34.03		25.29	269	0.30
96	14.15	34.25		240	100	14.07	34.30		25.65	235	0.37
115	13.51	34.50		209	125	13.39	34.58		26.00	202	0.42
135	13.25	34.60		197	150	12.39	34.48		26.12	190	0.48
164	11.44	34.34		183	200	10.39	34.37		26.42	162	0.56
192	10.39	34.33		165	250	10.22	34.49		26.53	151	0.64
231	10.44	34.45		157	300	10.01	34.58		26.64	141	0.72
260	10.08	34.51		147	400	8.38	34.49		26.84	122	0.86
308	10.01	34.60		139	500	7.27	34.48		26.99	108	0.98
370	8.82	34.50		128	600	6.38	34.46		27.09	98	1.09
469	7.54	34.48		111							
557	6.80	34.47		102							
631	6.08	34.46		93							
130.50	BLACK DOUGLAS; October 20, 1959; 1952 GCT; 25°52'N, 114°46.5'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 20°.										
0	22.29	34.14	4.97	439	0	22.29	34.14	4.97	23.51	439	0.00
9	22.28	34.12	5.05	440	10	22.28	34.12	5.04	23.50	440	0.04
33	22.12	34.14	4.84	435	20	22.24	34.12	5.01	23.51	439	0.09
43	20.86	33.96	4.86	414	30	22.18	34.13	4.92	23.53	437	0.13
57	18.45	33.83	5.33	365	50	19.70	33.87	5.09	24.00	392	0.21
70	16.70	33.91	5.07	318	75	16.32	33.93	4.90	24.87	309	0.30
94	14.62	34.07	3.03	263	100	14.29	34.12	2.63	25.47	252	0.37
113	13.72	34.25	1.93	231	125	13.20	34.39	1.30	25.90	211	0.43
131	12.97	34.43	1.13	203	150	12.18	34.42	1.13	26.12	190	0.48
160	11.80	34.42	1.14	183	200	10.57	34.40	1.08	26.41	163	0.57
187	10.80	34.36	1.16	170	250	9.89	34.50		26.60	145	0.65
224	10.23	34.49	0.85	151	300	9.52	34.52		26.68	137	0.73
252	9.86	34.50	-	145	400	8.27	34.50	0.31	26.86	120	0.86
298	9.54	34.52	-	138	500	7.30	34.48	0.34	26.99	108	0.98
358	8.78	34.50	0.40	127	600	6.10	34.42	0.30	27.10	97	1.09
451	7.76	34.49	0.28	113							
536	6.90	34.45	0.39	105							
610	6.00	34.43	0.26	95							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; October 21, 1959; 0138 GCT; 25°29'N, 115°24'W; sounding, 2000 fm; wind, 330°, force 5; weather, cloudy; sea, very rough; wire angle, 10°. 130.60

1	23.36	34.35	4.66	453	0	(23.36)	(34.35)	(4.66)	(23.36)	(453)	(0.00)
11	23.40	34.40	4.60	451	10	23.40	34.40	4.60	23.38	451	0.05
31	23.06	34.38	4.71	443	20	23.33	34.40	4.61	23.40	449	0.09
40	20.26	34.22	5.28	380	30	23.08	34.38	4.69	23.46	443	0.13
55	19.18	34.21	5.35	355	50	19.52	34.22	5.34	24.30	363	0.22
71	18.08	34.08	5.24	338	75	17.60	34.05	5.16	24.66	329	0.30
95	15.66	33.98	4.90	291	100	15.29	33.96	4.80	25.12	285	0.38
115	13.46	33.86	3.85	255	125	12.94	33.86	3.51	25.54	245	0.45
134	12.06	33.89	2.86	227	150	11.59	33.98	2.56	25.89	212	0.51
154	11.48	34.03	2.47	206	200	10.78	34.34	1.37	26.31	172	0.60
183	11.13	34.29	1.54	181	250	10.17	34.48	0.73	26.54	150	0.69
217	10.36	34.34	1.30	164	300	10.13	34.63	0.27	26.66	139	0.76
246	10.17	34.47	0.81	151	400	8.59	34.51	0.23	26.82	124	0.90
295	10.19	34.63	0.27	140	500	7.18	34.44	0.20	26.98	109	1.02
349	9.30	34.54	0.27	132	600	6.33	34.47	0.32	27.11	96	1.13
432	8.16	34.49	0.21	119							
515	6.97	34.43	0.20	107							
601	6.32	34.47	0.32	96							

BLACK DOUGLAS; October 21, 1959; 0632 GCT; 25°09'N, 116°02'W; sounding, 1920 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 06°. 130.70

1	23.36	34.38	4.81	451	0	(23.36)	(34.38)	(4.81)	(23.38)	(451)	(0.00)
11	23.38	34.38	4.71	452	10	23.38	34.38	4.71	23.37	452	0.05
31	23.40	34.39	4.74	451	20	23.40	34.39	4.74	23.38	451	0.09
41	23.38	34.42	4.80	449	30	23.40	34.39	4.74	23.38	451	0.14
57	20.08	34.04	5.48	389	50	20.85	34.11	5.44	23.87	404	0.22
71	18.64	34.02	5.39	355	75	18.08	34.00	5.33	24.50	344	0.31
96	15.16	33.84	4.56	290	100	15.10	33.95	4.06	25.15	282	0.39
116	15.02	34.22	2.49	260	125	13.91	34.16	2.33	25.58	242	0.46
136	12.90	34.10	2.20	226	150	12.24	34.19	1.90	25.93	208	0.52
155	12.17	34.20	1.85	206	200	12.47	34.69	0.36	26.27	176	0.62
185	12.72	34.63	0.49	184	250	11.52	34.70	0.21	26.46	158	0.70
222	12.00	34.70	0.28	166	300	10.78	34.67	0.20	26.58	146	0.78
252	11.48	34.70	0.18	157	400	8.86	34.51	0.27	26.78	128	0.92
302	10.74	34.67	0.20	146	500	7.47	34.47	0.23	26.95	111	1.05
358	9.33	34.50	0.35	136	600	6.47	34.45	0.26	27.08	99	1.16
442	8.42	34.51	0.16	122							
527	7.06	34.45	0.26	107							
610	6.42	34.45	0.25	98							

BLACK DOUGLAS; October 20, 1959; 0337 GCT; 26°04.5'N, 112°48'W; sounding, 45 fm; wind, 280°, force 4; weather, partly cloudy; sea, moderate; wire angle, 03°. 133.25

0	24.27	34.37	4.62	477	0	24.27	34.37	4.62	23.11	477	0.00
10	24.27	34.38	4.63	476	10	24.27	34.38	4.63	23.12	476	0.05
30	21.75	34.13	5.06	425	20	24.23	34.38	4.65	23.13	475	0.10
50	18.38	34.12	4.81	342	30	21.75	34.13	5.06	23.65	425	0.14
75	16.72	34.32	2.37	289	50	18.38	34.12	4.81	24.52	342	0.22
					75	16.72	34.32	2.37	25.08	289	0.30

BLACK DOUGLAS; October 20, 1959; 0100 GCT; 25°54.5'N, 113°07.5'W; sounding, 106 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 16°. 133.30

0	25.53	34.57	4.61	499	0	25.53	34.57	4.61	22.88	499	0.00
10	25.53	34.56	4.45	500	10	25.53	34.56	4.45	22.87	500	0.05
29	23.67	34.47	5.15	453	20	25.29	34.55	4.54	22.93	494	0.10
48	19.36	33.88	5.64	383	30	23.45	34.45	5.20	23.41	448	0.15
72	16.32	33.93	4.56	309	50	18.75	33.86	5.59	24.23	370	0.23
97	13.96	33.96	3.12	257	75	15.20	33.86	4.05	25.07	290	0.31
121	13.40	34.19	2.00	230	100	13.95	33.99	3.05	25.44	255	0.38
150	13.66	34.61	0.64	204	125	13.41	34.25	1.77	25.75	225	0.44
					150	13.66	34.61	0.64	25.98	204	0.50

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δT_3	Z	T	S	O_2	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

133.40 BLACK DOUGLAS; October 19, 1959; 1855 GCT; 25°34.5'N, 113°45.5'W; sounding, 1260 fm; wind, 330°, force 5; weather, partly cloudy; sea, rough; wire angle, 04°.

2	26.10	34.67	4.47	509	0	(26.10)	(34.67)	(4.47)	(22.77)	(509)	(0.00)
12	26.10	34.69	4.51	508	10	26.10	34.68	4.50	22.78	508	0.05
37	22.10	34.27	5.16	425	20	26.06	34.69	4.53	22.80	506	0.10
47	21.14	34.32	5.16	396	30	23.80	34.43	5.01	23.29	460	0.15
62	19.12	34.21	5.02	353	50	20.85	34.32	5.16	24.03	389	0.23
78	16.74	33.98	4.64	315	75	17.20	34.02	4.74	24.73	322	0.32
103	13.80	33.96	2.92	254	100	14.23	33.97	3.34	25.36	262	0.40
123	13.44	34.22	1.50	228	125	13.44	34.23	1.48	25.72	228	0.46
143	12.73	34.32	1.16	207	150	12.62	34.39	0.96	26.02	200	0.52
173	12.42	34.54	0.44	186	200	12.32	34.71	0.18	26.32	171	0.61
203	12.30	34.72	0.17	170	250	11.37	34.70	0.15	26.49	155	0.69
243	11.50	34.71	0.14	156	300	10.48	34.60	0.14	26.58	147	0.77
273	10.89	34.62	0.14	152	400	8.43	34.42	0.34	26.78	128	0.92
323	10.10	34.59	0.14	141	500	7.28	34.43	0.23	26.95	111	1.04
389	8.58	34.42	0.34	130	600	6.26					
489	7.38	34.43	0.24	112							
578	6.44	34.44	0.15	100							
653	5.88	-	-								

133.50 BLACK DOUGLAS; October 19, 1959; 1208 GCT; 25°15.5'N, 114°28'W; sounding, 1800 fm; wind, 320°, force 5; weather, cloudy; sea, high; wire angle, 15°.

0	25.84	34.52	4.37	512	0	25.84	34.52	4.37	22.74	512	0.00
9	25.84	34.56	4.31	509	10	25.83	34.56	4.31	22.77	509	0.05
33	25.77	34.56	4.43	507	20	25.82	34.56	4.31	22.77	509	0.10
43	20.25	34.05	5.34	393	30	25.81	34.56	4.35	22.78	508	0.15
58	17.48	33.96	5.05	333	50	19.40	34.01	5.29	24.18	375	0.24
72	15.44	33.91	4.00	291	75	14.80	33.92	3.58	25.21	277	0.32
97	13.02	34.01	2.82	236	100	12.98	34.06	2.66	25.69	231	0.39
116	12.62	34.16	1.91	217	125	12.62	34.27	1.45	25.92	209	0.44
135	12.60	34.42	0.99	198	150	12.29	34.45	0.89	26.12	190	0.50
165	11.88	34.48	0.81	180	200	11.74	34.65	0.43	26.38	165	0.58
195	11.78	34.64	0.45	166	250	11.12	34.61	0.34	26.47	157	0.67
234	11.29	34.61	0.37	160	300	10.69	34.62	0.30	26.56	148	0.75
262	11.00	34.62	0.31	154	400	9.42	34.58	0.22	26.74	131	0.89
311	10.58	34.62	0.31	147	500	7.32	34.47	0.22	26.99	108	1.02
376	9.82	34.60	0.23	136	600	5.34	34.48	0.21	27.25	83	1.12
471	8.04	34.49	0.23	117							
560	5.66	34.49	0.20	86							
633	5.19	34.48	0.22	82							

133.60 BLACK DOUGLAS; October 19, 1959; 0555 GCT; 24°54.5'N, 115°02'W; sounding, 2000 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 32°.

1	24.53	34.40	4.62	482	0	(24.53)	(34.40)	(4.62)	(23.06)	(482)	(0.00)
9	24.52	34.40	4.66	482	10	24.51	34.40	4.67	23.06	482	0.05
26	23.94	34.31	4.90	472	20	24.46	34.40	4.70	23.07	481	0.10
35	21.17	33.96	5.18	423	30	22.82	34.17	5.05	23.37	452	0.14
48	18.84	-	-		50	18.78	33.80	5.20	24.18	375	0.23
61	18.61	33.80	5.21	371	75	17.12	33.86	4.86	24.63	332	0.31
81	16.60	33.89	4.64	318	100	14.52	34.06	2.80	25.38	261	0.39
98	14.65	34.05	2.93	265	125	12.08	34.09	2.14	25.89	212	0.45
115	13.32	34.24	1.88	224	150	10.62	33.98	2.15	26.07	195	0.50
132	11.33	34.00	2.28	206	200	10.48	34.35	1.14	26.38	165	0.59
157	10.56	34.02	2.09	191	250	9.92	34.47	0.95	26.58	147	0.67
211	10.47	34.42	0.96	160	300	9.38	34.50	0.52	26.69	136	0.75
253	9.86	34.47	0.95	146	400	8.18	34.45	0.37	26.84	122	0.88
300	9.38	34.50	0.52	136	500	7.18	34.44	0.27	26.98	109	1.00
371	8.50	34.45	0.44	127							
443	7.84	34.47	0.26	116							
522	6.92	34.43	0.28	106							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
BLACK DOUGLAS; October 19, 1959; 0003 GCT; 24°34.5'N, 115°39'W; sounding, 2000 fm; wind, 340°, force 5; weather, partly cloudy; sea, rough; wire angle, 15°.											133.70
0	23.60	34.28	4.59	465	0	23.60	34.28	4.59	23.24	465	0.00
10	23.60	34.22	4.50	469	10	23.60	34.22	4.50	23.19	469	0.05
29	23.52	34.22	4.56	467	20	23.58	34.22	4.51	23.19	469	0.09
39	22.03	33.14	4.79	433	30	23.51	34.22	4.55	23.22	466	0.14
54	19.10	33.99	5.24	368	50	19.63	34.02	5.20	24.12	380	0.22
93	14.57	33.79	4.03	282	75	16.18	33.85	4.69	24.84	312	0.31
112	13.69	34.10	2.33	248	100	14.41	33.91	3.53	25.28	270	0.39
132	12.76	34.16	1.96	220	125	12.78	34.11	2.02	25.76	224	0.45
151	12.66	34.35	1.27	204	150	12.66	34.35	1.27	25.98	204	0.50
181	11.53	34.47	0.87	175	200	11.67	34.65	0.41	26.40	164	0.60
215	11.73	34.70	0.26	161	250	11.14	34.64	0.24	26.49	155	0.68
244	11.23	34.65	0.24	156	300	10.55	34.60	0.18	26.57	148	0.76
292	10.68	34.61	0.19	150	400	8.70	34.49	0.25	26.80	126	0.90
346	9.76	34.59	0.26	136	500	7.13	34.41	0.26	26.96	111	1.02
429	8.13	34.46	0.23	121	600	(6.38)	(34.49)	(0.17)	(27.13)	(94)	(1.13)
513	6.96	34.41	0.26	109							
597	6.38	34.49	0.17	95							
BLACK DOUGLAS; October 17, 1959; 0844 GCT; 25°34'N, 112°19'W; sounding, 39 fm; wind, 280°, force 2; weather, partly cloudy; sea, slight; wire angle, 01°.											137.23
0	24.82	34.47	4.58	486	0	24.82	34.47	4.58	23.01	486	0.00
10	24.82	34.47	4.58	486	10	24.82	34.47	4.58	23.01	486	0.05
30	24.27	34.34	4.52	479	20	24.64	34.42	4.56	23.03	484	0.10
50	20.38	34.18	4.65	386	30	24.27	34.34	4.52	23.09	479	0.15
					50	20.38	34.18	4.65	24.06	386	0.23
BLACK DOUGLAS; October 17, 1959; 1213 GCT; 25°20'N, 112°46'W; sounding, 150 fm; wind, 280°, force 3; weather, clear; sea, moderate; wire angle, 03°.											137.30
0	25.32	34.54	4.59	495	0	25.32	34.54	4.59	22.92	495	0.00
9	25.32	34.56	4.42	494	10	25.30	34.56	4.42	22.93	494	0.05
29	23.78	34.30	4.58	468	20	24.71	34.49	4.48	23.06	481	0.10
49	20.4	34.22	5.23	384	30	23.69	34.30	4.58	23.21	467	0.15
74	17.80	34.09	4.41	330	50	20.40	34.22	5.23	24.09	383	0.23
98	15.40	34.30	2.37	262	75	17.78	34.09	4.39	24.66	329	0.32
123	15.32	34.47	1.53	248	100	15.38	34.32	2.29	25.38	260	0.40
163	14.42	34.72	0.46	211	125	15.32	34.48	1.48	25.54	246	0.46
203	12.70	34.69	0.17	180	150	14.98	34.68	0.79	25.74	226	0.52
253	11.41	34.69	0.09	156	200	12.84	34.69	0.18	26.20	182	0.62
					250	11.48	34.69	0.10	26.46	158	0.71
BLACK DOUGLAS; October 17, 1959; 1506 GCT; 25°10'N, 113°04.5'W; sounding, 600 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 03°.											137.35
0	25.92	34.64	4.23	506	0	25.92	34.64	4.23	22.80	506	0.00
10	25.92	34.63	4.32	506	10	25.92	34.63	4.32	22.80	506	0.05
30	23.16	34.34	4.55	448	20	25.63	34.60	4.33	22.87	500	0.10
40	21.20	34.23	4.85	404	30	23.16	34.34	4.55	23.41	448	0.15
55	19.94	-	5.00		50	20.41	34.18	4.97	24.05	387	0.23
71	17.89	34.07	4.71	334	75	17.45	34.08	4.56	24.72	323	0.32
96	16.37	34.35	2.32	279	100	16.12	34.36	2.07	25.25	273	0.40
116	15.04a)	34.54	1.20	237	125	13.82	34.43	0.97	25.81	220	0.46
136	14.04a)	34.56	0.91	215	150	13.59	34.66	0.65	26.03	199	0.51
157	13.31	34.67	0.56	192	200	11.70	34.59	0.46	26.34	169	0.61
186	11.78	34.53	0.56	174	250	11.28	34.70	0.23	26.51	153	0.69
221	11.62	34.65	0.28	163	300	10.57	34.67	0.12	26.62	143	0.77
251	11.27	34.70	0.22	153	400	9.03	34.57	0.16	26.80	126	0.91
301	10.56	34.67	0.12	143	500	7.34	34.46	0.17	26.97	110	1.03
356	9.73	34.61	0.13	134	600	6.29	34.42	0.18	27.08	99	1.14
442	8.37	34.52	0.17	120							
527	6.91	34.53	0.17	106							
612	6.22	34.42	0.18	98							

a) A temperature inversion of about 1.5°C indicated by the bathythermograph observation was not entered in the temperature curve because it was below the grid on the card.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

137.40 BLACK DOUGLAS; October 17, 1959; 1753 GCT; 25°00'N, 113°23.5'W; sounding, 1500 fm; wind, 270°, force 3; weather, clear; sea, moderate; wire angle, 03°.

0a)	26.20	34.63	4.41	515	0	26.20	34.63	4.41	22.71	515	0.00
10	26.06	34.65	4.28	509	10	26.06	34.65	4.28	22.77	509	0.05
30	25.48	34.56	4.38	498	20	25.88	34.63	4.30	22.80	506	0.10
40	22.60	34.33	4.95	434	30	25.48	34.56	4.38	22.89	498	0.15
49	20.99	34.23	5.28	398	50	20.86	34.22	5.28	23.96	396	0.24
64	19.12	34.14	5.28	358	75	17.45	34.05	5.08	24.70	325	0.33
80	16.44	33.99	4.92	308	100	13.85	33.82	3.67	25.32	266	0.41
100	13.85	33.82	3.67	266	125	13.28	34.22	1.69	25.75	225	0.47
125	13.28	34.22	1.69	225	150	13.29	34.59	0.50	26.04	198	0.52
145	13.36	34.56	0.54	202	200	11.92	34.62	0.28	26.33	170	0.62
175	12.60	34.63	0.38	182	250	11.06	34.62	0.18	26.49	155	0.70
205	11.78	34.62	0.27	168	300	10.24	34.57	0.18	26.60	145	0.78
235	11.30	34.63	0.19	158	400	8.91	34.52	0.12	26.79	127	0.92
276	10.64	34.60	0.18	150	500	7.32	34.45	0.13	26.96	111	1.05
336	9.68	34.54	0.18	138							
411	8.77	34.52	0.11	126							
486	7.53	34.46	0.14	112							
566	6.51	34.41	0.09	102							

137.50 BLACK DOUGLAS; October 17, 1959; 2330 GCT; 24°40'N, 114°02'W; sounding, 1850 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 17°.

1	26.04	34.50	4.43	520	0	(26.04)	(34.50)	(4.43)	(22.66)	(520)	(0.00)
10	26.00	34.50	4.48	518	10	26.00	34.50	4.48	22.68	518	0.05
29	25.80	34.50	4.54	512	20	25.95	34.50	4.50	22.69	517	0.10
39	22.37	34.20	5.08	437	30	25.79	34.50	4.54	22.74	512	0.16
50	18.02	34.00	5.12	342	50	18.02	34.00	5.12	24.52	342	0.24
63	15.06	33.87	3.77	288	75	13.98	33.89	3.09	25.35	263	0.32
77	13.78	33.89	2.98	259	100	12.36	34.03	2.26	25.79	222	0.38
96	12.46	34.00	2.34	226	125	11.64	34.19	1.68	26.05	197	0.43
119	11.90	34.16	1.80	204	150	10.98	34.28	1.21	26.24	179	0.48
138	11.06	34.21	1.49	186	200	11.13	34.55	0.33	26.42	162	0.57
167	10.93	34.36	0.83	172	250	10.33	34.58	0.32	26.59	146	0.64
194	11.22	34.55	0.34	163	300	9.63	34.53	0.29	26.67	138	0.72
223	10.60	34.54	0.38	153	400	8.03	34.46	0.22	26.86	120	0.85
260	10.25	34.59	0.30	144	500	6.88	34.44	0.18	27.02	105	0.97
317	9.36	34.51	0.30	136							
389	8.18	34.46	0.23	121							
462	7.31	34.44	0.19	111							
540	6.48	34.45	0.16	100							

137.60 BLACK DOUGLAS; October 18, 1959; 0529 GCT;[b] 24°20'N, 114°39.5'W; sounding, 1840 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 15°.

63	15.12	34.02	3.26	277
68	13.58	33.80	4.05	262
73	13.46	33.95	3.16	248
78	13.02	33.96	2.89	240
83	13.72	34.31	1.81	227
88	14.03	34.43	1.38	225
93	14.24	34.58	1.02	218
98	14.31	34.62	0.75	216
103	14.12	34.76	0.43	202
108	13.88	34.70	0.40	202
113	13.58	34.69	0.38	196
118	13.38	34.67	0.30	194

a) Because of a slight malfunction of the winch, all depths above 300 meters may be greater.
b) Test cast.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

BLACK DOUGLAS; October 18, 1959; 0635 GCT; 24°20'N, 114°39.5'W; sounding, 1841 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 15°. 137.60

0	25.04	34.45	4.32	494	0	25.04	34.45	4.32	22.93	494	0.00
10	25.02	34.47	4.56	492	10	25.02	34.47	4.56	22.95	492	0.05
29	24.99	34.45	4.55	492	20	25.02	34.46	4.50	22.95	492	0.10
39	19.67	34.10	5.35	374	30	24.99	34.45	4.55	22.95	492	0.15
53	15.74	33.94	4.53	296	50	16.60	34.00	4.78	24.86	310	0.23
68	13.42	33.86	3.81	254	75	13.40	34.02	2.96	25.57	242	0.30
91	14.18	34.65	0.83	211	100	13.86	34.68	0.56	25.98	204	0.35
111	13.54	34.67	0.42	197	125	13.29	34.71	0.36	26.12	190	0.40
130	13.22	34.72	0.34	187	150	12.78	34.75	0.32	26.26	177	0.45
149	12.82	34.75	0.32	178	200	11.70	34.68	0.25	26.42	162	0.54
177	12.21	34.71	0.20	169	250	10.81	34.62	0.25	26.54	151	0.62
210	11.48	34.67	0.30	159	300	10.17	34.56	0.33	26.61	144	0.69
239	10.96	34.63	0.25	153	400	8.55	34.51	0.27	26.83	124	0.83
286	10.40	34.58	0.31	147	500	7.19	34.47	0.24	27.00	107	0.95
340	9.30	34.50	0.40	135	600	(6.23)	(34.44)	(0.24)	(27.10)	(97)	(1.06)
421	8.28	34.50	0.25	120							
504	7.13	34.47	0.24	106							
587	6.34	34.44	0.24	98							

BLACK DOUGLAS; October 18, 1959; 1147, 1601 GCT; 23°58.5'N, 115°23'W; sounding, 2000+ fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 10°, 05°. 137.70

0	24.28	34.37	4.46	478	0	24.28	34.37	5.37	23.10	478	0.00
10	24.30	34.40	4.54	476	10	24.30	34.40	5.47	23.12	476	0.05
29	23.54	34.28	4.64	463	20	23.81	34.30	4.60	23.19	469	0.10
39	23.19	34.25	4.72	456	30	23.53	34.28	4.64	23.25	463	0.14
55	18.42	33.83	5.30	364	50	21.83	34.13	4.93	23.61	429	0.23
68	15.66a)	33.74	4.98	308	75	14.82	33.70	4.77	25.03	294	0.32
94	13.50a)	33.78	3.91	261	100	14.01	34.08	3.44	25.49	250	0.39
114	13.30a)	34.40	1.37	212	125	13.50	34.61	0.73	26.01	201	0.45
135	13.70	34.76	0.39	194	150	13.38	34.82	0.26	26.20	183	0.50
154	13.27	34.83	0.24	180	200	12.36	34.81	0.15	26.40	164	0.59
182	12.58	34.79	0.17	170	250	11.78	34.78	0.13	26.48	156	0.67
217	12.18	34.83	0.15	160	300	10.88	34.68	0.16	26.57	148	0.75
247	11.82	34.79	0.13	156	400	8.72	34.54	0.24	26.83	123	0.89
297	10.94	34.68	0.15	149	500	7.60	34.52	0.15	26.98	109	1.01
350	9.50	34.60	0.28	131	600	6.36	34.49	0.12	27.12	95	1.12
433	8.06	34.51	0.23	116	700	5.65	34.49	0.12	27.22	86	1.22
518	7.32	34.51	0.17	106	800	5.08	34.52	0.17	27.31	77	1.31
602	6.28	34.49	0.19	94	1000	4.23	34.56	0.32	27.43	66	1.48
					1200	3.64	34.60	0.53	27.53	57	1.62
396b)	8.95	34.56	0.13	126	1500	3.00	34.60	0.86	27.59	51	1.81
496	7.72	34.52	0.11	111	2000	2.14	34.65	1.73	27.70	40	2.09
595	6.47	34.49	0.11	96	2500	1.81	34.65	2.09			
695	5.68	34.49	0.13	86	3000	1.68	34.68	2.60			
795	5.10	34.52	0.17	78							
997	4.23	34.56	0.32	66							
1195	3.66	34.60	0.53	57							
1394	3.24	34.58	0.68	55							
1594	2.79	34.63	1.04	47							
1792	2.46	34.63	1.41	44							
1991	2.16	34.65	1.71	40							
2191	1.98	34.65	2.03	39							
2388	1.87	34.65	2.08	38							
2587	1.79	34.65	2.19	37							
2785	1.72	34.67	2.39	36							
2985	1.68	34.68	2.58	34							
3084	1.66	34.70	2.60	33							
3184	1.65	34.64r	2.58								

a) A temperature inversion of about 2°C indicated by the bathythermograph observation was modified in the property curve because of poor agreement.

b) Overlapping casts; reconciliation of property curves when necessary.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
60.52-F	X-23	1215	37°54.0'	123°02.0'	40	340°	2	clear	moderate	12.41	33.63
63.55-F	21	1845	37°12.5'	122°50.0'	185	320°	4	cloudy	rough	14.21	33.58
67.50-F	19	1510	36°49.0'	122°05.0'	58	330°	1	partly cloudy	moderate	14.69	33.64
70.55-F	17	2150	36°03.5'	122°02.0'	750	-	1	overcast	slight	16.62	33.65
73.51-F	17	1555	35°35.5'	121°21.0'	200	-	1	fog	slight	16.44	33.65
77.50-F	15	2010	35°04.0'	120°52.0'	78	320°	4	clear	rough	17.80	33.69
87.50-F	11	2215	33°20.0'	119°39.5'	35	270°	2	cloudy	moderate	18.54	33.69
93.45-O	9	1405	32°20.0'	118°32.0'	-	-	-	missing	missing	19.85	33.66
93.55-O	9	2013	32°02.0'	119°12.5'	900	310°	3	partly cloudy	very rough	18.84	33.58
97.35-O	12	1100	32°02.0'	117°31.0'	525	300°	2	partly cloudy	moderate	20.22	33.68
97.45-O	12	0430	31°43.0'	118°09.0'	1200	300°	3	overcast	moderate	19.64	33.69
97.55-O	11	2242	31°23.0'	118°47.0'	300	310°	2	cloudy	slight	19.18	33.48
100.29-O	12	1935	31°42.0'	116°43.5'	70	330°	1	fog	slight	18.14	33.58
100.35-O	13	2320	31°31.0'	117°07.0'	650	290°	2	fog	slight	19.88	33.70
100.45-O	14	0540	31°11.0'	117°47.0'	2000	270°	2	cloudy	slight	20.30	33.73
100.55-O	14	1115	30°50.5'	118°27.0'	2000+	270°	2	overcast	slight	20.35	33.80
103.45-O	16	1129	30°32.5'	117°25.0'	1000	300°	2	cloudy	moderate	19.86	33.58
103.55-O	16	0606	30°14.0'	118°04.0'	2000	300°	2	cloudy	moderate	20.48	33.78
107.45-O	17	0950	30°02.0'	117°03.0'	1000+	300°	3	cloudy	rough	20.43	33.73
107.55-O	17	1530	29°42.0'	117°42.0'	2000	300°	3	cloudy	moderate	19.86	33.71

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
110.45-O	X-20	1351	29°26.0'	116°38.0'	500	320°	4	cloudy	very rough	21.05	33.87
110.55-O	20	0750	29°06.0'	117°19.0'	2000+	300°	4	cloudy	rough	21.44	33.94
113.45-B	29	0848	28°54.5'	116°20.0'	1000	240°	3	overcast	rough	20.80	33.94
113.55-B	29	0338	28°32.0'	116°57.0'	1700	270°	3	overcast	very rough	20.96	33.97
117.45-B	27	0450	28°18.0'	115°56.0'	1950	310°	5	overcast	rough	20.62	33.87
117.55-B	27	1015	27°58.0'	116°34.5'	2000	290°	5	overcast	very rough	20.98	33.95
120.40-B	24	2350	27°56.5'	115°14.0'	24	320°	4	clear	moderate	20.54	33.78
120.55-B	24	1545	27°25.0'	116°13.0'	1940	310°	4	partly cloudy	rough	22.28	34.14
123.55-B	23	0335	26°48.0'	115°49.5'	2000	320°	3	clear	moderate	22.09	34.07
127.45-B	22	0108	26°33.0'	114°48.5'	1650	330°	5	clear	rough	22.92	34.31
127.55-B	21	1930	26°13.5'	115°27.0'	1880	320°	4	partly cloudy	moderate	21.68	34.00
130.45-B	20	1710	25°58.5'	114°26.5'	2000	320°	5	cloudy	rough	24.97	34.54
130.55-B	20	2305	25°40.0'	115°06.0'	1900	330°	5	cloudy	very rough	23.24	34.22
133.35-B	19	2200	25°44.5'	113°26.5'	500	320°	4	partly cloudy	very rough	25.92	34.59
133.45-B	19	1550	25°24.0'	114°05.0'	1740	320°	5	cloudy	high	25.78	34.52
133.55-B	19	0905	25°05.0'	114°45.0'	2000	320°	5	cloudy	high	25.74	34.54
134.36-B	19	2055	25°37.5'	113°25.0'	75	330°	4	partly cloudy	very rough	25.92	34.60
137.45-B	17	2040	24°50.0'	113°43.0'	1750	300°	4	partly cloudy	rough	26.03	34.54
137.55-B	18	0225	24°30.0'	114°20.5'	1900	320°	4	missing	rough	25.60	34.52

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

77.53 PAOLINA-T; November 18, 1959; 0728 GCT; 34°57.5'N, 121°06'W; sounding, 280 fm; wind, 290°, force 2; weather, cloudy; sea, slight; wire angle, 02°.

2	15.74	33.57	5.59	323	0	(15.74)	(33.57)	(5.59)	(24.73)	(323)	(0.00)
12	15.57	33.62	5.57	315	10	15.59	33.62	5.58	24.80	316	0.03
32	14.04	33.58	4.97	287	20	15.52	33.62	5.55	24.82	314	0.06
41	12.60	33.55	4.49	262	30	14.50	33.59	5.17	25.01	296	0.09
52	11.21	33.60	3.98	233	50	11.53	33.58	4.07	25.60	240	0.15
62	10.74	33.64	3.88	222	75	10.57	33.64	3.66	25.82	219	0.20
72	10.59	33.64	3.68	220	100	10.12	33.76	3.17	26.00	202	0.26
87	10.41	33.70	3.52	212	125	9.73	33.87	2.92	26.14	188	0.31
102	10.08	33.77	3.16	202	150	9.38	33.89	2.76	26.21	182	0.36
117	9.84	33.86	2.99	191	200	8.71	34.02	2.41	26.42	162	0.44
142	9.50	33.89	2.80	183	250	8.24	34.18	1.70	26.62	143	0.52
172	9.06	33.89	2.66	177	300	7.62	34.17	1.66	26.70	135	0.59
207	8.64	34.06	2.33	158	400	7.13	34.27	0.94	26.85	121	0.72
257	8.18	34.19	1.62	141	500	5.83	34.39	0.36	27.11	96	0.84
307	7.54	34.17	1.68	134							
411	7.07	34.28	0.82	120							
512	5.68	34.42a)	0.30	92							

77.55 PAOLINA-T; November 18, 1959; 1052 GCT; 34°54'N, 121°13'W; sounding, 280 fm; wind, 290°, force 2; weather, cloudy; sea, slight; wire angle, 02°.

2	15.68	33.66	5.61b)	314	0	(15.68)	(33.66)	(5.61)	(24.82)	(314)
12	15.66	33.69	5.58	312	10	15.66	33.65	5.59	24.83	313
-	-	-	-		20					
-	-	-	-		30					
-	-	-	-		50					
-	-	-	-		75					
-	-	-	-		100					
-	-	-	-		125					
-	-	-	-		150					
-	-	-	-		200	8.71	34.12	1.99	26.50	154
-	-	-	-		250	8.16	34.19	1.66	26.64	141
172	9.10	34.03	2.43	168	300	7.82	34.24	1.22	26.73	132
207	8.62	34.15	1.91	151	400	6.99	34.32	0.70	26.91	115
256	8.10	34.20	1.63	140	500	6.14	34.31	0.51	27.02	105
306	7.79	34.25	1.17	131						
410	6.90	34.33	0.68	113						
510	6.06	34.31	0.49	105						

77.60 PAOLINA-T; November 18, 1959; 1441 GCT; 34°43'N, 121°34'W; sounding, 500 fm; wind, 290°, force 2; weather, cloudy; sea, slight; wire angle, 02°.

2	15.56	33.64	5.49	314	0	(15.56)	(33.64)	(5.49)	(24.82)	(314)	(0.00)
12	15.57	33.66	5.29	312	10	15.57	33.65	5.33	24.83	313	0.03
32	12.93	33.56	4.46	267	20	15.55	33.66	5.27	24.84	312	0.06
42	11.74	33.55	4.06	246	30	13.02	33.56	4.49	25.30	268	0.09
52	11.23	33.59	3.80	235	50	11.32	33.58	3.83	25.64	236	0.14
67	10.46	33.68	3.55	214	75	10.10	33.75	3.34	25.98	203	0.20
82	9.80	33.84	3.04	192	100	9.47	33.90	2.78	26.21	182	0.25
102	9.44	33.91	2.78	181	125	9.29	33.99	2.51	26.30	173	0.29
127	9.24	34.00	2.45	171	150	9.03	34.06	2.14	26.40	164	0.33
147	9.07	34.06	2.17	164	200	8.68	34.12	1.95	26.50	154	0.41
177	8.84	34.09	2.06	159	250	8.37	34.19	1.43	26.60	144	0.49
207	8.62	34.14	1.89	152	300	8.10	34.22	1.30	26.67	138	0.56
237	8.44	34.18	1.51	146	400	7.49	34.31	1.04	26.83	123	0.70
277	8.25	34.21	1.35	141	500	6.78	34.26	0.60	26.89	117	0.82
337	7.86	34.26	1.22	132							
402	7.48	34.31	1.02	123							
487	6.90	34.27	0.64	118							
566	6.28	34.33	0.48	106							

a) The use of this value results in an unusual density structure, but nevertheless the value was accepted in drawing the property curve.

b) Alternate value, 5.76 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
PAOLINA-T; November 18, 1959; 2041 GCT; 34°24'N, 122°16'W; sounding, 2200 fm; wind, 310°, force 3; weather, cloudy; sea, rough; wire angle, 09°.											77.70
2	16.40	33.81	5.33	320	0	(16.40)	(33.81)	(5.33)	(24.76)	(320)	(0.00)
12	16.40	33.84	5.39	317	10	16.40	33.84	5.39	24.78	318	0.03
32	16.40	33.86	5.34	316	20	16.40	33.85	5.39	24.78	317	0.06
42	15.36	33.76	4.79	301	30	16.40	33.86	5.36	24.80	316	0.10
52	13.02	33.71	4.07	258	50	13.50	33.71	4.18	25.32	267	0.15
66	10.72	33.83	3.24	208	75	10.42	33.84	3.09	25.99	202	0.21
82	10.04	33.82	2.91	197	100	9.46	33.88	2.63	26.19	184	0.26
100	9.46	33.88	2.63	184	125	9.08	33.92	2.39	26.28	174	0.31
125	9.06	33.92	2.39	174	150	8.67	33.97	2.36	26.38	165	0.35
144	8.74	33.96	2.39	167	200	8.04	34.09	1.67	26.58	146	0.43
173	8.33	34.05	2.02	154	250	7.60	34.21	1.22	26.73	132	0.50
202	8.02	34.10	1.64	146	300	7.27	34.25	0.94	26.81	125	0.57
232	7.73	34.18	1.35	136	400	6.52	34.33	0.50	26.98	108	0.69
271	7.47	34.23	1.11	129	500	5.79	34.31	0.29	27.07	101	0.80
330	7.06	34.27	0.74	120							
405	6.49	34.34	0.48	107							
480	5.92	34.31	0.33	103							
559	5.42	34.34	0.23	95							
PAOLINA-T; November 19, 1959; 1805 GCT; 34°22.5'N, 120°40'W; sounding, 250 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 04°.											80.53
2	16.48	33.66	5.57	333	0	(16.48)	(33.66)	(5.57)	(24.62)	(333)	(0.00)
12	16.47	33.62	5.54	335	10	16.47	33.62	5.55	24.60	335	0.03
33	14.52	33.57	4.96	297	20	15.41	33.58	5.20	24.80	315	0.07
51	12.05	33.52	4.42	254	30	14.53	33.55	4.97	24.98	299	0.10
77	10.71	33.57	4.04	226	50	12.14	33.52	4.45	25.44	255	0.15
102	10.24	33.71	3.75	209	75	10.73	33.57	4.04	25.73	227	0.21
126	9.86	33.71	3.57	202	100	10.25	33.71	3.77	25.92	209	0.27
165	9.33	33.89	2.82	181	125	9.88	33.71	3.58	25.98	203	0.32
206	8.62	34.05	1.98	158	150	9.52	33.81	3.15	26.12	190	0.37
256	7.97	34.16	1.36	140	200	8.72	34.04	2.08	26.43	161	0.46
306	7.63	34.23	1.06	131	250	8.01	34.15	1.42	26.62	142	0.54
412	6.80	34.26	0.60	118	300	7.66	34.23	1.05	26.73	132	0.61
					400	6.90	34.26	0.64	26.87	119	0.74
PAOLINA-T; November 19, 1959; 1546 GCT; 34°18.5'N, 120°48.5'W; sounding, 400 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 17°.											80.55
2	15.82	33.64	5.49	319	0	(15.82)	(33.64)	(5.49)	(24.76)	(319)	(0.00)
11	15.81	33.64	5.51	319	10	15.81	33.64	5.50	24.76	319	0.03
31	15.66	33.71	5.51	311	20	15.75	33.65	5.51	24.78	317	0.06
60	12.03	33.59	4.35	248	30	15.67	33.71	5.51	24.85	311	0.10
69	10.60	33.62	3.95	221	50	15.50	33.70	5.50	24.89	307	0.16
82	10.34	33.67	3.62	213	75	10.43	33.64	3.78	25.84	217	0.22
97	-	-	-		100	10.15	33.78	3.38	26.00	202	0.28
112	9.55	33.82	3.12	189	125	9.48	33.82	3.08	26.14	188	0.33
136	9.40	33.83	3.04	186	150	9.14	33.93	2.62	26.28	175	0.37
155	9.06	33.96	2.44	171	200	8.72	34.10	1.80	26.48	156	0.46
183	8.88	34.02	2.03	164	250	8.19	34.11	1.53	26.56	148	0.53
212	8.60	34.12	1.70	153	300	7.74	34.21	1.04	26.71	134	0.60
241	8.28	34.10	1.60	150	400	6.90	34.29	0.74	26.89	117	0.74
290	7.85	34.20	1.08	136	500	6.25	34.31	0.50	27.00	107	0.85
343	7.28	34.23	0.94	126	600	(5.63)	(34.33)	(0.29)	(27.09)	(98)	(0.96)
426	6.74	34.30	0.65	114							
511	6.18	34.31	-	106							
594	5.66	34.33	0.29	98							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
80.60	PAOLINA-T; November 19, 1959; 1020 GCT; 34°06.5'N, 121°12.5'W; sounding, 2000+ fm; wind, 320°, force 7; weather, cloudy; sea, rough; wire angle, 16°.										
4	15.84	33.62	5.57	321	0	(15.9)	(33.62)		(24.74)	(321)	(0.00)
13	15.86	33.60	5.62	323	10	15.85	33.61	5.61	24.73	322	0.03
33	15.87	33.59	5.59	324	20	15.86	33.60	5.61	24.71	323	0.06
42	15.89	33.63	5.59	321	30	15.87	33.59	5.61	24.71	324	0.10
56	-	-	-		50	15.87	33.58	5.19	24.96	300	0.16
71	11.06	33.58	4.13	232	75	10.66	33.59	4.03	25.74	226	0.23
95	-	-	-		100	9.89	33.76	3.61	26.03	199	0.28
114	9.12	33.80	3.34	184	125	8.96	33.85	3.09	26.25	178	0.33
133	8.84	33.91	2.87	172	150	8.59	34.04	2.59	26.45	159	0.37
151	8.58	34.04	2.58	158	200	8.11	34.11	1.99	26.58	146	0.45
179	8.34	34.07	2.34	153	250	7.42	34.21	1.37	26.76	129	0.52
212	7.95	34.14	1.73	142	300	7.07	34.27	0.98	26.86	120	0.58
240	7.53	34.20	1.45	132	400	6.51	34.32	0.67	26.97	109	0.70
287	7.12	34.25	1.06	122	500	5.97	34.31	0.67	27.04	103	0.81
340	6.95	34.34	0.78	113	600	(5.50)	(34.38)	(0.33)	(27.15)	(93)	(0.91)
424	6.34	34.31	0.64	108							
508	5.92	34.32	0.66	102							
591	5.54	34.37	0.37	94							
80.70	PAOLINA-T; November 19, 1959; 0340 GCT; 33°50'N, 121°48'W; sounding, 2000 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 10°.										
2	15.82	33.62	5.43	321	0	(15.82)	(33.62)	(5.43)	(24.75)	(321)	(0.00)
12	15.82	33.67	5.56	317	10	15.82	33.66	5.54	24.78	318	0.03
31	15.80	33.64	5.40	319	20	15.81	33.64	5.40	24.77	319	0.06
61	11.74	33.44	4.60	254	30	15.80	33.64	5.40	24.77	319	0.10
70	11.12	33.60	3.96	231	50	15.74	33.63	5.38	24.78	318	0.16
85	10.2	33.66	3.64	211	75	11.02	33.62	3.89	25.72	229	0.23
99	9.41	33.73	3.53	194	100	9.39	33.73	3.52	26.09	193	0.28
114	9.11	33.86	2.98	180	125	8.92	33.92	2.75	26.31	172	0.33
139	8.70	34.00	2.57	163	150	8.60	34.01	2.42	26.43	161	0.37
158	8.54	34.02	2.36	159	200	7.83	34.07	2.30	26.59	145	0.45
187	7.92	34.06	2.67	147	250	7.14	34.19	1.79	26.78	127	0.52
216	7.78	34.09	1.81	143	300	6.60	34.18	1.45	26.85	121	0.58
245	7.22	34.19	1.82a)	128	400	5.96	34.20	0.83	26.95	111	0.70
295	6.63	34.18	1.48	121	500	5.50	34.29	0.49	27.08	99	0.81
349	6.28	34.17	1.01	118	600	5.13	34.37	0.29	27.19	89	0.91
434	5.78	34.24	0.70	106							
519	5.44	34.31	0.41	97							
604	5.12	34.38	0.28	88							
82.47	PAOLINA-T; November 17, 1959; 2116 GCT; 34°13.5'N, 119°58.5'W; sounding, 310 fm; wind, 280°, force 3; weather, partly cloudy; sea, slight; wire angle, 00°.										
2	17.42	33.68	5.27	352	0	(17.42)	(33.68)	(5.27)	(24.42)	(352)	(0.00)
12	16.85	33.68	5.30	339	10	17.00	33.68	5.30	24.53	342	0.03
37	13.99	33.52	5.01	290	20	16.02	33.65	5.29	24.66	329	0.07
47	13.00	33.53	4.69	270	30	14.80	33.61	5.25	24.77	319	0.10
62	12.37	33.51	4.63	260	50	13.00	33.54	4.69	25.28	270	0.16
77	11.16	33.77	3.85	220	75	11.35	33.76	3.98	25.76	224	0.22
97	9.90	33.77	3.10	199	100	9.82	33.78	3.07	26.04	197	0.28
122	9.53	33.86	2.82	186	125	9.51	33.88	2.77	26.18	184	0.32
147	9.41	34.00	2.37	174	150	9.39	34.00	2.35	26.30	173	0.37
166	9.27	34.02	2.12	170	200	9.00	34.10	1.70	26.44	160	0.45
216	8.88	34.14	1.52	155	250	8.52	34.20	1.16	26.59	146	0.53
265	8.35	34.22	0.99	142	300	7.96	34.22	0.82	26.69	136	0.60
325	7.70	34.22	0.72	132	400	7.00	34.27	0.36	26.87	119	0.74
384	7.13	34.26	0.42	122	500	6.53	34.30	0.06	26.95	111	0.86
444	6.68	34.29	0.11	114							
493	6.54	34.30	0.03	111							
523	6.52	34.29	0.09	111							
553	6.52	34.34	0.04	108							

a) Alternate value, 2.00 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m	

PAOLINA-T; November 20, 1959; 1440 GCT; 34°07.5'N, 119°34'W; sounding, 130 fm; wind, 320°, force 1; weather, clear; sea, slight; wire angle, 04°. 83.43

2	17.26	33.68	5.43	348	0	(17.26)	(33.68)	(5.43)	(24.46)	(348)	(0.00)	
12	17.04	33.66	5.49	345	10	17.07	33.66	5.48	24.49	345	0.03	
32	16.28	33.61	5.56	331	20	17.00	33.65	5.50	24.50	344	0.07	
52	14.28	33.54	5.24	295	30	16.35	33.62	5.55	24.62	333	0.10	
77	11.92	33.60	4.38	245	50	14.29	33.53	5.25	25.01	296	0.17	
102	10.58	33.71	3.75	214	75	12.10	33.59	4.43	25.50	249	0.23	
127	9.97	33.75	3.35	201	100	10.61	33.70	3.78	25.86	215	0.29	
167	9.32	33.93	2.69	178	125	10.00	33.75	3.39	26.00	202	0.35	
207	8.90	34.09	1.96	159	150	9.55	33.85	2.99	26.15	187	0.40	
					200	8.96	34.07	2.08	26.42	162	0.48	

PAOLINA-T; November 21, 1959; 0240 GCT; 33°37'N, 120°40'W; sounding, 740 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°. 83.60

1	16.12	33.63	5.33	326	0	(16.12)	(33.63)	(5.33)	(24.69)	(326)	(0.00)
11	16.12	33.61	5.36	328	10	16.12	33.61	5.36	24.68	327	0.03
31	16.07	33.64	5.40	325	20	16.10	33.62	5.39	24.69	326	0.07
59	12.45	33.37	4.68	272	30	16.08	33.64	5.40	24.70	325	0.10
69	10.89	33.48	4.17	236	50	15.99	33.64	5.39	24.73	323	0.16
83	10.10	33.51	4.03	221	75	10.52	33.49	4.10	25.71	229	0.23
97	9.54	33.62	3.78	204	100	9.42	33.65	3.69	26.02	200	0.29
111	9.06	33.75	3.42	187	125	8.84	33.85	3.25	26.27	176	0.33
135	8.72	33.89	3.22	172	150	8.57	33.94	3.30	26.37	166	0.38
154	8.53	33.95	3.30	164	200	7.90	34.00	3.08	26.53	151	0.46
182	8.19	34.02	3.13	154	250	7.28	34.09	2.09	26.68	137	0.53
211	7.73	34.00	3.05	149	300	7.18	34.18	1.12	26.77	128	0.60
240	7.32	34.07	2.43	138	400	6.43	34.30	0.66	26.97	110	0.72
288	7.24	34.16	1.24	131	500	5.94	34.34	0.49	27.06	101	0.83
342	6.79	34.27	0.92	116	600	(5.38)	(34.38)	(0.25)	(27.17)	(91)	(0.93)
425	6.32	34.31	0.59	108							
509	5.90	34.34	0.48	100							
593	5.41	34.38	0.26	92							

PAOLINA-T; November 21, 1959; 2111 GCT; 33°40'N, 118°58'W; sounding, 410 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°. 87.40

1	18.36	33.76	5.31	367	0	(18.36)	(33.76)	(5.31)	(24.26)	(367)	(0.00)
11	18.14	33.77	5.39	362	10	18.17	33.77	5.37	24.31	362	0.04
30	15.91	33.57	5.64a)	326	20	18.10	33.77	5.40	24.33	361	0.07
41	14.34	33.53	5.27	297	30	15.91	33.57	5.64	24.69	326	0.11
56	12.89	33.56	4.71	266	50	13.40	33.54	4.91	25.21	277	0.17
71	12.13	33.60	4.43	250	75	11.91	33.62	4.33	25.55	244	0.23
96	10.92	33.66	4.01	224	100	10.75	33.67	3.97	25.80	220	0.29
116	10.22	33.70	3.80	209	125	10.02	33.74	3.62	25.99	203	0.34
135	9.86	33.84	3.32	193	150	9.60	33.91	2.90	26.20	183	0.40
155	9.50	33.93	2.77	180	200	9.10	34.14	2.00	26.45	159	0.48
185	9.24	34.14	2.03	161	250	8.44	34.20	1.49	26.60	144	0.56
220	8.86	34.13	1.98	156	300	7.95	34.28	1.17	26.74	131	0.63
249	8.46	34.20	1.50	145	400	7.12	34.30	0.80	26.87	119	0.76
299	7.96	34.28	1.17	131	500	6.41	34.33	0.46	27.00	107	0.88
354	7.48	34.30	0.92	124	600	5.87	34.40	0.33	27.12	95	0.98
438	6.84	34.31	0.71	114							
523	6.24	34.34	0.39	105							
608	5.84	34.42	0.32	94							

a) Alternate value, 5.78 ml/L, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
8760	PAOLINA-T; November 21, 1959; 0840 GCT; 32°58.5'N, 120°20'W; sounding, 410 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 10°.										
3	16.76	33.58	5.49	344	0	(16.76)	(33.58)	(5.49)	(24.50)	(344)	(0.00)
13	16.76	33.55	5.40	346	10	16.76	33.55	5.40	24.48	346	0.03
33	16.76	33.58	5.41	344	20	16.76	33.55	5.40	24.48	346	0.07
62	13.96	33.45	5.49	295	30	16.76	33.57	5.40	24.49	345	0.10
72	12.90	33.51	5.17	270	50	16.40	33.57	5.42	24.58	337	0.17
87	11.60	33.55	4.68	243	75	12.61	33.52	5.07	25.34	264	0.25
101	10.30	33.65	4.17	214	100	10.32	33.65	4.18	25.86	214	0.31
116	10.16	33.67	4.14	210	125	9.97	33.69	4.05	25.96	205	0.36
140	9.45	33.75	3.63	193	150	9.20	33.80	3.40	26.17	186	0.41
159	9.00	33.85	3.23	179	200	8.44	34.00	2.50	26.45	159	0.50
188	8.54	33.99	2.57	162	250	7.82	34.09	1.73	26.60	144	0.58
217	8.34	34.02	2.41	156	300	7.48	34.15	1.34	26.70	135	0.65
246	7.88	34.08	1.81	145	400	6.74	34.30	0.62	26.93	113	0.78
295	7.50	34.13	1.40	136	500	6.28	34.30	0.48	26.99	108	0.89
348	7.04	34.25	0.89	121	600	(5.64)	(34.36)	(0.32)	(27.12)	(96)	(1.00)
434	6.60	34.32	0.63	110							
516	6.16	34.29	0.46	107							
599	5.64	34.36	0.33	96							
9028	PAOLINA-T; November 22, 1959; 0648 GCT; 33°28'N, 117°47'W; sounding, 225 fm; wind, 090°, force 2; weather, fog; sea, moderate; wire angle, 00°.										
1	18.26	33.73	5.25	367	0	(18.26)	(33.73)	(5.25)	(24.26)	(367)	(0.00)
11	18.26	33.75	5.01	366	10	18.26	33.75	5.02	24.27	366	0.04
31	14.90	33.51	5.69a)	309	20	17.98	33.73	5.04	24.32	361	0.07
51	13.37	33.53	4.92	277	30	15.08	33.52	5.68	24.84	312	0.11
76	12.32	33.60	4.58	253	50	13.42	33.53	4.95	25.19	279	0.17
101	11.38	33.66	4.12	231	75	12.37	33.60	4.61	25.45	254	0.23
126	10.31	33.78	3.51	204	100	11.41	33.66	4.15	25.67	233	0.29
166	9.58	33.97	2.85	179	125	10.35	33.77	3.54	25.95	206	0.35
206	9.24	34.07	2.19	166	150	9.80	33.90	3.12	26.15	187	0.40
256	8.79	34.20	1.61	149	200	9.29	34.06	2.27	26.35	168	0.49
306	8.24	34.23	1.19	140	250	8.83	34.19	1.66	26.53	151	0.57
					300	8.31	34.23	1.26	26.64	141	0.65
9030	PAOLINA-T; November 22, 1959; 0850 GCT; 33°24.5'N, 117°55'W; sounding, 298 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 03°.										
2	18.17	33.71	5.33	367	0	(18.17)	(33.71)	(5.33)	(24.26)	(367)	(0.00)
12	18.15	33.77	5.38	362	10	18.15	33.76	5.36	24.30	363	0.04
32	17.58	33.69	5.54	354	20	18.09	33.76	5.40	24.33	361	0.07
42	15.96	33.55	5.51	328	30	17.90	33.74	5.47	24.35	358	0.11
52	14.04	33.49	5.41	294	50	14.20	33.49	5.46	25.00	297	0.17
62	13.62	33.53	5.02	282	75	12.77	33.53	4.76	25.32	266	0.24
72	12.97	33.53	4.82	270	100	11.16	33.63	4.15	25.70	230	0.31
87	11.90	33.53	4.44	250	125	10.28	33.72	3.68	25.92	209	0.36
102	11.07	33.64	4.11	228	150	9.78	33.84	3.11	26.10	192	0.41
117	10.48	33.69	3.83	214	200	9.20	34.07	2.22	26.38	165	0.50
141	9.95	33.79	3.32	198	250	8.83	34.19	1.49	26.53	151	0.59
171	9.44	33.95	2.66	178	300	8.19	34.23	1.19	26.66	139	0.66
205	9.16	34.09	2.14	163	400	7.15	34.25	0.74	26.83	123	0.80
255	8.78	34.20	1.44	149	500	6.43	34.30	0.49	26.97	110	0.92
304	8.12	34.23	1.16	138							
409	7.08	34.25	0.70	122							
509	6.38	34.31	0.48	108							

a) Alternate value, 5.87 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m

PAOLINA-T; November 22, 1959; 1258 GCT; 33°10.5'N, 118°23.5'W; sounding, 600 fm; wind, 060°, force 3; weather, fog; sea, moderate; wire angle, 06°. 90.37

1	18.18	33.75	5.24	364	0	(18.18)	(33.75)	(5.25)	(24.29)	(364)	(0.00)
11	18.18	33.74	5.31	364	10	18.18	33.74	5.31	24.29	364	0.04
31	16.99	33.64	5.51	345	20	18.17	33.74	5.31	24.29	364	0.07
41	14.07	33.47	5.34	296	30	17.80	33.71	5.40	24.35	358	0.11
56	12.58	33.46	4.82	268	50	12.90	33.46	5.04	25.20	278	0.17
71	11.82	33.49	4.41	252	75	11.74	33.56	4.21	25.58	241	0.24
95	10.64	33.65	3.88	220	100	10.63	33.68	3.83	25.84	217	0.30
115	9.92	33.71	3.49	203	125	9.90	33.77	3.40	26.03	199	0.35
135	9.44	33.82	3.19	188	150	9.36	33.86	2.81	26.19	184	0.40
155	9.34	33.87	2.75	183	200	9.05	34.13	1.77	26.45	158	0.48
184	9.18	34.06	2.04	166	250	8.36	34.20	1.31	26.61	144	0.56
218	8.74	34.18	1.51	150	300	7.82	34.18	1.03	26.68	137	0.63
247	8.42	34.20	1.35	144	400	7.16	34.26	0.71	26.84	122	0.77
297	7.86	34.18	1.05	138	500	6.35	34.30	0.39	26.98	109	0.89
352	7.60	34.27	0.87	128	600	5.78	34.34	0.31	27.08	99	1.00
436	6.84	34.26	0.61	118							
521	6.21	34.31	0.35	106							
605	5.76	34.34	0.31	98							

PAOLINA-T; November 22, 1959; 1842 GCT; 32°54.5'N, 118°56.5'W; sounding, 900 fm; wind, 280°, force 2; weather, missing; sea, very rough; wire angle, 01°. 90.45

2	16.58	33.58	5.44	340	0	(16.58)	(33.58)	(5.44)	(24.54)	(340)	(0.00)
12	16.52	33.55	5.63	340	10	16.53	33.55	5.59	24.54	340	0.03
32	16.22	33.51	5.54	337	20	16.43	33.54	5.60	24.54	340	0.07
42	14.52	33.48	5.53	304	30	16.26	33.53	5.58	24.56	339	0.10
57	13.22	33.45	5.27	280	50	13.69	33.46	5.39	25.08	289	0.16
71	12.26	33.52	4.91	258	75	11.97	33.55	4.80	25.49	250	0.23
96	10.90	33.66	4.31	223	100	10.68	33.67	4.17	25.82	219	0.29
116	10.09	33.71	3.70	206	125	9.92	33.76	3.40	26.02	199	0.34
136	9.75	33.83	3.11	192	150	9.53	33.89	2.88	26.18	184	0.39
156	9.46	33.91	2.81	181	200	8.97	34.07	2.12	26.42	162	0.48
185	9.10	34.02	2.39	168	250	8.55	34.20	1.48	26.58	146	0.56
219	8.80	34.14	1.79	154	300	8.31	34.22	1.31	26.64	141	0.63
249	8.56	34.20	1.49	146	400	7.19	34.29	0.83	26.86	120	0.77
299	8.32	34.22	1.32	141	500	6.56	34.31	0.50	26.96	110	0.89
352	7.65	34.25	1.00	130	600	5.81	34.37	0.35	27.10	97	1.00
437	6.94	34.31	0.71	114							
523	6.42	34.31	0.43	109							
607	5.76	34.38	0.35	96							

PAOLINA-T; November 22, 1959; 2245 GCT; 32°44.5'N, 119°17.5'W; sounding, 250 fm; wind, 280°, force 2; weather, clear; sea, rough; wire angle, 15°. 90.50

3	17.19	33.58	5.30	354	0	(17.19)	(33.58)	(5.30)	(24.40)	(354)	(0.00)
12	16.92	33.60	5.44	346	10	16.95	33.60	5.42	24.48	347	0.04
32	16.84	33.61	5.51	344	20	16.87	33.60	5.48	24.49	345	0.07
51	16.73	33.58	5.30	344	30	16.85	33.61	5.50	24.50	344	0.10
75	13.35	33.51	4.97	279	50	16.77	33.58	5.31	24.51	344	0.17
98	11.55	33.57	4.40	241	75	13.35	33.51	4.97	25.19	279	0.25
122	10.21	33.66	4.28	212	100	11.48	33.58	4.88	25.61	239	0.32
159	9.28	33.82	3.57	186	125	10.08	33.67	4.21	25.92	209	0.37
197	8.70	33.95	2.74	167	150	9.46	33.79	3.76	26.11	191	0.42
244	8.52	34.16	1.89	149	200	8.68	33.96	2.68	26.38	166	0.51
291	7.98	34.22	1.41	136	250	8.48	34.17	1.86	26.57	147	0.59
392	6.90	34.31	0.80	115	300	7.88	34.23	1.34	26.71	134	0.67
					400	(6.80)	(34.32)	(0.79)	(26.94)	(113)	(0.80)

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

90.55 PAOLINA-T; November 23, 1959; 0225 GCT; 32°34.5'N, 119°38.5'W; sounding, 390 fm; wind, 280°, force 3; weather, clear; sea, rough; wire angle, 17°.

2	17.39	33.59	5.41	357	0	(17.39)	(33.59)	(5.41)	(24.36)	(357)	(0.00)
11	17.39	33.61	-	356	10	17.39	33.61	5.41	24.38	356	0.04
31	17.30	33.60	5.43	354	20	17.34	33.61	5.41	24.38	355	0.07
58	16.60	33.52	5.59	345	30	17.30	33.60	5.42	24.39	355	0.11
68	14.26	33.34	5.67	309	50	17.20	33.59	5.44	24.40	353	0.18
82	12.92	33.44	5.24	275	75	13.60	33.37	5.57	25.04	293	0.26
95	11.74	33.50	4.58	250	100	11.60	33.55	4.48	25.56	243	0.33
109	10.48	33.65	4.15	217	125	9.59	33.72	3.76	26.04	198	0.38
131	9.46	33.75	3.65	193	150	9.21	33.85	3.33	26.20	182	0.43
149	9.22	33.85	3.34	182	200	9.13	34.22	1.91	26.51	153	0.52
177	8.96	34.07	2.46	162							
201	9.14	34.22	1.88	153							
228	8.82	34.23	1.60	148							

90.60 PAOLINA-T; November 22, 1959; 0557 GCT; 32°25'N, 119°59'W; sounding, 450 fm; wind, 280°, force 3; weather, clear; sea, very rough; wire angle, 07°.

2	17.24	33.62	5.32	352	0	(17.24)	(33.62)	(5.32)	(24.42)	(352)	(0.00)
12	17.26	33.65	5.34	350	10	17.26	33.64	5.34	24.43	351	0.04
32	17.18	33.64	5.32	349	20	17.24	33.65	5.33	24.44	350	0.07
61	13.48	33.46	5.34	285	30	17.19	33.64	5.32	24.45	349	0.11
71	12.78	33.48	4.94	270	50	14.50	33.49	5.32	24.93	303	0.17
86	12.19	33.53	4.66	256	75	12.60	33.49	4.83	25.33	265	0.24
101	11.08	33.57	4.37	233	100	11.17	33.57	4.38	25.65	235	0.30
116	10.50	33.59	4.10	222	125	10.17	33.63	3.91	25.88	213	0.36
141	9.55	33.78	3.47	193	150	9.17	33.83	3.32	26.20	183	0.41
161	8.84	33.86	3.20	176	200	8.30	33.99	2.46	26.46	158	0.50
191	8.42	33.95	2.75	163	250	7.63	34.08	2.00	26.63	142	0.58
221	8.06	34.04	2.09	151	300	7.27	34.13	1.52	26.71	134	0.65
251	7.62	34.08	1.99	142	400	6.86	34.25	0.68	26.87	119	0.78
300	7.27	34.13	1.52	134	500	6.07	34.29	0.42	27.01	106	0.90
355	7.18	34.23	0.87	125	600	5.68	34.37	0.35	27.12	95	1.00
439	6.51	34.26	0.56	114							
524	5.96	34.43u	0.35								
608	5.66	34.38	0.32	94							

90.70 PAOLINA-T; November 23, 1959; 1215 GCT; 32°07'N, 120°42'W; sounding, 2000+ fm; wind, 320°, force 1; weather, clear; sea, very rough; wire angle, 11°.

2	16.94	33.60	5.46	346	0	(16.94)	(33.60)	(5.46)	(24.48)	(346)	(0.00)
12	16.94	33.59	5.57	347	10	16.94	33.59	5.54	24.47	347	0.03
32	16.96	33.61	5.43	346	20	16.95	33.60	5.50	24.47	347	0.07
41	16.81	33.59	5.52	344	30	16.96	33.61	5.43	24.48	346	0.10
56	12.58	33.49	4.70	266	50	13.45	33.50	4.95	25.16	281	0.17
71	11.45	33.55	4.26	241	75	11.19	33.58	4.12	25.66	234	0.23
95	10.12	33.72	3.70	206	100	10.00	33.73	3.59	25.98	203	0.29
115	9.72	33.75	3.38	197	125	9.39	33.82	3.37	26.15	187	0.34
133	9.14	33.86	3.37	180	150	8.78	33.89	3.15	26.31	172	0.38
152	8.75	33.89	3.13	172	200	8.09	34.02	2.49	26.51	153	0.46
181	8.28	34.01	2.83	156	250	7.54	34.08	1.78	26.64	141	0.54
214	7.95	34.02	2.24	151	300	6.88	34.11	1.50	26.75	130	0.61
242	7.66	34.07	1.84	143	400	5.99	34.15	0.78	26.91	115	0.74
290	7.02	34.11	1.55	132	500	5.48	34.26	0.37	27.06	101	0.85
343	6.36	34.10	1.27	124	600	(5.11)	(34.35)		(27.17)	(91)	(0.95)
424	5.85	34.18	0.69	112							
506	5.46	34.27	0.36								
589	5.16	34.34	0.26	92							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
PAOLINA-T; November 23, 1959; 1825 GCT; 31°42.5'N, 121°18'W; sounding, 2000+ fm; wind, 300°, force 1; weather, clear; sea, rough; wire angle, 10°.											90.80
2	16.28	33.42	5.42	345	0	(16.28)	(33.42)	(5.42)	(24.49)	(345)	(0.00)
12	16.16	33.44	5.38	341	10	16.18	33.44	5.38	24.53	341	0.03
32	15.98	33.40	5.45	340	20	16.06	33.43	5.40	24.54	341	0.07
61	13.33	33.17	5.63	303	30	15.99	33.40	5.44	24.54	341	0.10
71	12.36	33.16	5.35	286	50	16.00	33.41	5.46	24.55	340	0.17
85	11.88	33.35	4.85	263	75	12.19	33.22	5.16	25.20	278	0.25
100	10.95	33.43	4.50	241	100	10.95	33.43	4.50	25.58	241	0.31
114	10.23	33.60	4.02	217	125	9.75	33.69	3.82	26.00	202	0.37
139	9.14	33.78	3.68	186	150	8.95	33.84	3.59	26.25	178	0.42
158	8.82	33.89	3.50	173	200	8.19	33.97	3.03	26.46	158	0.50
187	8.38	33.96	3.19	162	250	7.51	34.05	2.27	26.63	142	0.58
217	7.94	33.99	2.81	153	300	6.90	34.07	1.67	26.72	133	0.65
246	7.57	34.05	2.34	143	400	6.09	34.17	0.99	26.91	115	0.78
295	6.96	34.07	1.73	134	500	5.49	34.26	0.52	27.05	102	0.89
349	6.45	34.27u	1.33u		600	5.09	34.36	0.41	27.18	90	1.00
432	5.89	34.23	0.78	108							
517	5.41	34.27	0.46	100							
601	5.08	34.36	0.41	90							
PAOLINA-T; November 25, 1959; 1211 GCT; 32°55'N, 117°23'W; sounding, 250 fm; wind, direction missing, force 1; weather, clear; sea, slight; wire angle, 02°.											93.28
2	18.25	33.76	5.35	365	0	(18.25)	(33.76)	(5.35)	(24.28)	(365)	(0.00)
12	18.24	33.73	5.26	367	10	18.25	33.73	5.26	24.26	367	0.04
32	16.47	33.60	5.70	336	20	18.24	33.73	5.26	24.26	367	0.07
52	13.42	33.51	5.05	280	30	18.18	33.72	5.26	24.27	366	0.11
77	11.80	33.62	4.32	242	50	13.56	33.51	5.08	25.14	283	0.18
102	10.57	33.71	3.95	214	75	11.91	33.61	4.37	25.55	244	0.24
127	10.01	33.74	3.50	203	100	10.63	33.70	3.98	25.85	216	0.30
167	9.36	33.91	2.74	180	125	10.09	33.74	3.56	25.97	204	0.35
207	9.02	34.05	2.22	164	150	9.62	33.82	3.05	26.12	191	0.40
257	8.74	34.22	1.46	147	200	9.07	34.02	2.32	26.36	167	0.49
307	8.12	34.23	1.29	138	250	8.79	34.20	1.53	26.55	150	0.58
412	6.99	34.27	0.64	119	300	8.22	34.23	1.32	26.66	139	0.65
					400	7.10	34.26	0.73	26.85	121	0.78
PAOLINA-T; November 25, 1959; 0945 GCT; 32°50'N, 117°31.5'W; sounding, 400 fm; wind, direction missing, force 1; weather, clear; sea, moderate; wire angle, 01°.											93.30
2	18.14	33.87	5.42	355	0	(18.14)	(33.87)	(5.42)	(24.39)	(355)	(0.00)
12	17.93	33.75	5.37	358	10	17.99	33.77	5.37	24.36	358	0.04
32	16.70	33.60	5.63	342	20	17.60	33.69	5.47	24.39	355	0.07
42	14.86	33.53	5.68	307	30	16.95	33.62	5.60	24.49	345	0.11
52	13.72	33.50	5.18	286	50	13.92	33.50	5.27	25.07	290	0.17
67	12.44	33.69	4.62	249	75	12.11	33.64	4.43	25.53	246	0.24
81	11.61	33.57	4.08	242	100	10.67	33.67	3.80	25.82	218	0.30
101	10.63	33.68	3.79	217	125	10.10	33.76	3.38	25.99	203	0.35
126	10.07	33.76	3.37	202	150	9.46	33.92	2.84	26.23	180	0.40
146	9.53	33.90	2.91	183	200	8.99	34.10	2.01	26.44	160	0.48
175	9.12	34.02	2.44	168	250	8.63	34.20	1.58	26.57	147	0.56
204	8.98	34.11	1.95	159	300	8.18	34.23	1.33	26.67	138	0.64
234	8.79	-	1.64		400	7.18	34.33	0.84	26.89	117	0.77
274	8.38	34.22	1.50	142	500	6.30	34.35	0.47	27.03	104	0.88
334	7.90	34.25	1.11	133							
409	7.06	34.34	0.80	115							
485	6.42	34.35	0.49	106							
564	5.84	34.38	0.45	97							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm/g	ΔD dyn. m

93.35 PAOLINA-T; November 25, 1959; 0525 GCT; 32°40.5'N, 117°52.5'W; sounding, 325 fm; wind, 045°, force 1; weather, clear; sea, moderate; wire angle, 00°.

2	18.36	33.73	5.24	370	0	(18.36)	(33.73)	(5.24)	(24.23)	(370)	(0.00)
12	18.16	33.72	5.25	366	10	18.20	33.73	5.24	24.26	367	0.04
32	17.15	33.60	5.41	351	20	18.08	33.71	5.26	24.28	365	0.07
42	15.63	33.55	5.64	322	30	17.45	33.63	5.35	24.38	356	0.11
52	14.50	33.52	5.45	300	50	14.70	33.52	5.49	24.92	304	0.18
66	13.16	33.57	4.89	270	75	12.59	33.60	4.65	25.40	258	0.25
82	12.22	33.62	4.49	250	100	11.28	33.69	4.12	25.72	228	0.31
102	11.20	33.69	4.10	226	125	10.30	33.70	3.99	25.90	210	0.36
126	10.26	33.70	3.98	210	150	9.62	33.83	3.22	26.12	190	0.41
146	9.71	33.82	3.33	192	200	8.92	33.96	2.75	26.34	169	0.50
176	9.23	33.93	2.92	177	250	8.82	34.22	1.89	26.56	148	0.59
206	8.88	33.98	2.70	167	300	8.34	34.23	1.53	26.64	141	0.66
235	8.88	34.20	2.07	151	400	7.14	34.36	0.82	26.92	114	0.79
275	8.64	34.23	1.65	145	500	6.38	34.34	0.59	27.01	106	0.91
334	7.90	34.25	1.35	133							
409	7.06	34.38	0.75	112							
484	6.48	34.34	0.61	107							
564	6.05	34.36	0.43	101							

93.40 PAOLINA-T; November 25, 1959; 0201 GCT; 32°30.5'N, 118°12.5'W; sounding, 900 fm; wind, 300°, force 2; weather, clear; sea, rough; wire angle, 00°.

1	17.95	33.67	5.40	364	0	(17.95)	(33.67)	(5.40)	(24.29)	(364)	(0.00)
11	17.70	33.69	5.38	357	10	17.72	33.69	5.38	24.36	358	0.04
31	15.78	33.52	5.67	327	20	17.16	33.68	5.48	24.49	345	0.07
41	14.24	33.50	5.43	297	30	16.30	33.60	5.62	24.62	332	0.11
51	13.68	33.54	5.19	282	50	13.71	33.54	5.21	25.14	284	0.17
65	12.58	33.58	4.73	259	75	12.09	33.59	4.50	25.49	250	0.23
81	11.82	33.59	4.34	245	100	10.73	33.65	4.03	25.79	222	0.29
101	10.69	33.65	4.01	220	125	9.90	33.75	3.60	26.01	200	0.35
126	9.90	33.75	3.59	200	150	9.62	33.91	2.81	26.19	184	0.40
145	9.62	33.89	2.90	186	200	9.49	34.14	1.99	26.39	165	0.48
175	9.59	34.10	2.13	169	250	8.37	34.12	2.10	26.54	150	0.56
205	9.40	34.14	1.99	163	300	8.10	34.23	1.60	26.67	138	0.64
234	8.48	34.07	2.21	155	400	7.01	34.26	0.98	26.86	120	0.77
273	8.28	34.18	1.88	144	500	6.61	34.33	0.61	26.96	110	0.89
333	7.76	34.25	1.27	131							
407	6.94	34.26	0.98	119							
481	6.74	34.32	0.64	112							
561	6.02	34.34	0.58	102							

93.50 PAOLINA-T; November 24, 1959; 1837 GCT; 32°10.5'N, 118°56'W; sounding, 750 fm; wind, 300°, force 2; weather, clear; sea, rough; wire angle, 03°.

2	17.30	33.63	5.35	353	0	(17.30)	(33.63)	(5.35)	(24.41)	(353)	(0.00)
12	17.14	33.60	5.35	351	10	17.17	33.60	5.35	24.42	352	0.04
32	17.00	33.61	5.41	347	20	17.00	33.61	5.40	24.47	347	0.07
42	16.05a)	33.54	5.57	331	30	17.00	33.61	5.40	24.47	347	0.10
52	14.31	33.44	5.49	302	50	14.70	33.45	5.52	24.86	310	0.17
67	13.13	33.48	4.97	276	75	12.65	33.53	4.68	25.34	264	0.24
82	12.02	33.52	4.44	254	100	10.84	33.63	4.12	25.75	225	0.30
102	10.75	33.64	4.10	222	125	10.08	33.76	3.58	26.00	202	0.36
127	10.02	33.77	3.54	201	150	9.47	33.89	2.99	26.20	183	0.41
147	9.52	33.87	3.02	185	200	8.88	34.11	2.30	26.46	158	0.49
177	9.06	34.00	2.57	168	250	8.37	34.20	1.62	26.62	143	0.57
206	8.81	34.13	2.23	155	300	8.03	34.26	1.17	26.71	134	0.64
236	8.42	34.16	1.87	148	400	6.94	34.36	0.80	26.95	112	0.77
276	8.28	34.26	1.29	138	500	6.05	34.34	0.51	27.05	102	0.88
336	7.62	34.27	1.03	128							
411	6.82	34.36	0.78	110							
486	6.13	34.34	0.52	103							
566	5.80	34.38	0.42	96							

a) Alternate value, 14.78°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
PAOLINA-T; November 24, 1959; 1227 GCT; 31°51'N, 119°31'W; sounding, 2000+ fm; wind, 300°, force 2; weather, clear; sea, rough; wire angle, 02°.											93.60
2	17.48	33.64	5.36	356	0	(17.48)	(33.64)	(5.36)	(24.38)	(356)	(0.00)
12	17.48	33.67	5.38	354	10	17.48	33.67	5.37	24.40	354	0.04
32	17.44	33.63	5.41	356	20	17.47	33.66	5.39	24.40	354	0.07
42	17.43	33.67	5.41	353	30	17.45	33.63	5.41	24.38	356	0.11
57	15.14	33.56	5.47	311	50	16.60	33.63	5.42	24.58	337	0.18
72	13.28	33.50	5.10	278	75	12.98	33.51	5.01	25.27	271	0.25
97	11.28	33.62	4.41	233	100	11.08	33.63	4.33	25.72	228	0.32
117	10.36	33.69	3.97	212	125	10.21	33.73	3.78	25.94	207	0.37
136	10.04	33.78	3.55	200	150	9.58	33.83	3.30	26.14	189	0.42
156	9.36	33.86	3.19	184	200	8.59	34.05	2.46	26.46	158	0.51
186	8.82	33.99	2.60	166	250	7.99	34.12	1.89	26.60	144	0.59
220	8.24	34.11	2.21	149	300	7.89	34.22	1.27	26.70	135	0.66
249	8.00	34.12	1.97	144	400	6.72	34.26	0.85	26.90	116	0.79
299	7.90	34.22	1.29	135	500	6.00	34.33	0.42	27.05	102	0.90
354	7.34	34.25	0.99	125	600	5.59	34.38	0.26	27.14	94	1.01
439	6.32	34.28	0.72	110							
524	5.90	34.34	0.37	100							
608	5.54	34.38	0.25	93							
PAOLINA-T; November 24, 1959; 0611 GCT; 31°30'N, 120°12'W; sounding, 2000+ fm; wind, 300°, force 1; weather, clear; sea, rough; wire angle, 08°.											93.70
2	17.14	33.66	5.38	347	0	(17.14)	(33.66)	(5.38)	(24.47)	(347)	(0.00)
12	17.03	33.64	5.39	346	10	17.05	33.64	5.39	24.48	346	0.03
32	17.43	33.84a)	5.32	340	20	17.03	33.66	5.38	24.50	344	0.07
62	12.68b)	33.20a)	5.47	290	30	17.41	33.82	5.32	24.54	340	0.10
72	12.61	33.39	5.14	274	50	17.30	33.86	5.32	24.59	336	0.17
87	11.26	33.49	4.56	242	75	11.40	33.39	4.73	25.47	252	0.24
101	10.73	33.58	4.17	226	100	10.77	33.58	4.19	25.73	227	0.30
116	10.10	33.64	3.96	212	125	9.85	33.69	3.74	25.98	204	0.36
140	9.45	33.77	3.35	192	150	9.17	33.82	3.28	26.19	184	0.41
159	8.92	33.86	3.21	177	200	8.37	34.01	2.64	26.46	158	0.50
189	8.46	33.98	2.70	161	250	7.77	34.08	1.95	26.60	144	0.57
218	8.19	34.05	2.50	152	300	7.50	34.21	1.43	26.74	131	0.64
247	7.80	34.07	2.01	145	400	6.71	34.28	0.64	26.91	115	0.77
296	7.52	34.20	1.48	131	500	5.93	34.31	0.54	27.04	103	0.88
350	7.08	34.26	0.92	121	600	5.33	34.40	0.44	27.19	89	0.99
434	6.46	34.29	0.55	111							
519	5.78	34.32	0.53	100							
601	5.32	34.40	0.44	89							
PAOLINA-T; November 24, 1959; 0001 GCT; 31°10'N, 120°54'W; sounding, 2000+ fm; wind, 300°, force 3; weather, clear; sea, rough; wire angle, 03°.											93.80
1	16.94	33.46	5.48	357	0	(16.94)	(33.46)	(5.48)	(24.36)	(357)	(0.00)
11	16.38	33.42	5.54	348	10	16.39	33.41	5.51	24.47	347	0.04
31	16.35	33.41	5.51	347	20	16.36	33.41	5.51	24.47	347	0.07
61	13.94	33.21	5.75	312	30	16.35	33.41	5.51	24.47	347	0.10
71	13.38	33.21	5.68	301	50	16.35	33.41	5.51	24.47	347	0.17
86	12.56	33.27	5.30	281	75	13.28	33.25	5.60	25.01	296	0.25
101	11.77	33.42	4.89	256	100	11.79	33.41	4.90	25.42	257	0.33
115	10.91	33.53	4.54	233	125	10.30	33.63	4.22	25.85	216	0.38
140	9.71	33.75	3.94	197	150	9.43	33.80	3.93	26.13	189	0.44
160	9.22	33.84	3.93	183	200	8.51	34.03	2.56	26.46	158	0.52
189	8.70	33.95	2.71	167	250	7.88	34.14	2.03	26.64	141	0.60
219	8.22	34.14	2.37	146	300	7.29	34.20	1.52	26.78	128	0.67
248	7.92	34.14	2.06	141	400	6.61	34.31	1.20	26.95	111	0.80
298	7.32	34.20	1.52	129	500	5.86	34.34	0.56	27.07	100	0.90
352	6.92	34.22	1.71	122	600	5.23	34.36	0.66	27.16	91	1.01
437	6.28	34.36	0.75	104							
522	5.69	34.33	0.52	98							
607	5.20	34.37	0.68	90							

a) Salinity samples at 32 and 62 meters appear to have been reversed; they are assumed to be in the order listed.

b) Alternate value, 13.02°C, not used in interpolation.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
83.40-P	XI-20	1210	34°13.5'	119°21.5'	11	320°	2	clear	slight	16.88	33.65
83.51-P	20	2030	33°52.0'	120°07.5'	52	290°	1	partly cloudy	slight	15.71	33.55
83.55-P	20	2330	33°44.5'	120°23.0'	700	320°	3	partly cloudy	rough	16.54	33.66
87.35-P	22	0030	33°50.0'	118°37.5'	310	300°	4	partly cloudy	moderate	17.58	33.68
87.45-P	21	1852	33°29.5'	119°18.0'	200	320°	1	partly cloudy	rough	16.86	33.62
87.50-P	21	1510	33°19.5'	119°39.0'	30	320°	3	partly cloudy	rough	16.14	33.53
87.55-P	21	1230	33°08.0'	119°55.0'	600	320°	4	clear	rough	16.24	33.53
93.45-P	24	2215	32°19.5'	118°32.0'	950	300°	1	clear	rough	17.49	33.68
93.55-P	24	1530	32°00.0'	119°15.5'	850	300°	2	clear	rough	17.44	33.64

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m
ORCA; December 9, 1959; 2240 GCT; 34°57'N, 121°04.5'W; sounding, 281 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.											77.53
1	15.96	33.64	5.42	322	0	(15.96)	(33.64)	(5.42)	(24.73)	(322)	(0.00)
11	15.94	33.63	5.67	322	10	15.95	33.63	5.65	24.73	322	0.03
30	15.78	33.61	5.19	320	20	15.89	33.62	5.44	24.74	321	0.06
49	14.72	33.55	5.11	303	30	15.78	33.61	5.19	24.76	320	0.10
75	12.70	33.49	4.63	268	50	14.68	33.55	5.10	24.95	302	0.16
100	11.96	33.51	4.37	252	75	12.70	33.49	4.63	25.30	268	0.23
124	10.62	33.57	3.92	225	100	11.96	33.51	4.37	25.47	252	0.30
163	9.68	33.82	2.95	192	125	10.61	33.58	3.91	25.77	224	0.36
203	9.04	33.99	2.28	169	150	9.98	33.74	3.27	26.00	202	0.41
253	8.34	34.03	2.14	155	200	9.11	33.98	2.33	26.32	171	0.50
302	8.06	34.15	1.36	143	250	8.39	34.03	2.17	26.47	156	0.59
408	7.23	34.23	0.83	126	300	8.07	34.15	1.37	26.62	143	0.67
					400	7.29	34.23	0.87	26.79	127	0.81
ORCA; December 10, 1959; 0032 GCT; 34°52.5'N, 121°13.5'W; sounding, 320 fm; wind, 280°, force 2; weather, overcast; sea, moderate; wire angle, 08°.											77.55
1	15.85	33.62	5.58	322	0	(15.85)	(33.62)	(5.58)	(24.74)	(322)	(0.00)
11	15.84	33.64	5.59	320	10	15.84	33.64	5.59	24.76	320	0.03
30	14.98	33.57	5.28	307	20	15.76	33.66	5.53	24.80	316	0.06
50	13.14	33.55	4.66	271	30	14.98	33.57	5.28	24.89	307	0.10
60	12.66	33.55	4.51	262	50	13.14	33.55	4.66	25.27	271	0.15
70	12.53	33.57	4.45	258	75	12.43	33.58	4.42	25.42	257	0.22
85	12.19	33.58	4.36	252	100	11.36	33.60	4.07	25.64	236	0.28
100	11.36	33.60	4.07	236	125	10.22	33.70	3.59	25.92	209	0.34
115	11.10	33.62	3.96	230	150	9.82	33.78	3.48	26.05	197	0.39
139	9.92	33.77	3.48	199	200	9.23	33.99	2.64	26.32	171	0.48
169	9.64	33.80	3.43	193	250	8.50	34.10	2.19	26.51	153	0.57
204	9.15	34.01	2.54	169	300	7.98	34.17	1.65	26.65	140	0.64
254	8.44	34.11	2.16	151	400	7.23	34.34	0.92	26.89	117	0.78
303	7.94	34.18	1.59	138	500	6.25	34.28	0.55	26.98	109	0.89
408	7.16	34.34	0.86	116							
508	6.16	34.27	0.51	108							
ORCA; December 10, 1959; 0335 GCT; 34°43.5'N, 121°33.5'W; sounding, 400 fm; wind, 280°, force 2; weather, overcast; sea, moderate; wire angle, 10°.											77.60
2	15.78	33.59	5.37	322	0	(15.78)	(33.59)	(5.37)	(24.74)	(322)	(0.00)
11	15.80	33.60	5.36	322	10	15.80	33.60	5.36	24.74	322	0.03
31	15.56	33.60	5.17	316	20	15.77	33.60	5.35	24.75	321	0.06
41	12.34	33.40	4.68	268	30	15.59	33.60	5.19	24.79	317	0.10
56	11.10	33.44	4.35	243	50	11.28	33.42	4.43	25.51	248	0.15
71	10.58	33.63	3.90	220	75	10.55	33.66	3.83	25.84	217	0.21
95	9.96	33.73	3.29	202	100	9.89	33.74	3.22	26.02	200	0.26
115	9.74	33.78	3.14	196	125	9.64	33.80	3.02	26.10	192	0.31
135	9.53	33.83	2.97	188	150	9.42	33.91	2.70	26.22	180	0.36
155	9.37	33.93	2.67	178	200	8.72	34.00	2.40	26.41	163	0.45
184	8.90	33.95	2.70	170	250	8.07	34.10	1.38	26.57	147	0.53
219	8.49	34.07	1.89	155	300	7.92	34.17	1.22	26.65	140	0.60
248	8.08	34.20u	1.39		400	7.29	34.23	0.89	26.80	126	0.74
298	7.94	34.16	1.23	140	500	6.42	34.29	0.45	26.96	110	0.86
353	7.56	34.21	1.05	131	600	5.51	34.34	0.32	27.11	96	0.97
437	7.02	34.25	0.73	121							
523	6.18	34.31	0.39	106							
608	5.45	34.34	0.31	95							

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
77.70	ORCA; December 10, 1959; 0841 GCT; 34°25.5'N, 122°11.5'W; sounding, 2200 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 06°.										
0	15.54	33.56	5.59	319	0	15.54	33.56	5.59	24.77	319	0.00
10	15.54	33.68	5.59	310	10	15.54	33.68	5.59	24.86	310	0.03
30	14.07	33.42	5.28	300	20	15.43	33.67	5.57	24.87	309	0.06
39	12.28	33.39	4.97	268	30	14.07	33.42	5.28	24.97	300	0.09
54	11.34	33.57	4.05	238	50	11.58	33.54	4.25	25.55	244	0.15
69	11.14	33.63	3.81	230	75	11.02	33.64	3.76	25.74	227	0.21
94	10.60	33.64	3.57	220	100	10.18	33.65	3.39	25.89	212	0.26
114	9.82	33.73	3.13	200	125	9.68	33.79	2.97	26.09	193	0.31
134	9.46	33.84	2.79	186	150	9.32	33.88	2.57	26.21	182	0.36
155	9.27	33.89	2.49	180	200	8.44	34.03	1.96	26.47	157	0.45
185	8.82	34.02	1.89	164	250	7.59	34.05	1.97	26.62	143	0.52
219	7.96	34.04	2.03	149	300	7.44	34.17	1.20	26.72	133	0.59
248	7.60	34.05	1.98	143	400	6.82	34.23	0.59	26.86	120	0.72
298	7.45	34.17	1.21	133	500	6.15	(34.30)	0.36	(27.01)	(106)	(0.84)
353	7.10	34.18	0.85	127	600	5.65		0.27			
438	6.58	34.27	0.47	114							
523	6.00	34.38u	0.34								
608	5.63	34.31u	0.26								
80.53	ORCA; December 11, 1959; 0300 GCT; 34°20'N, 120°36.5'W; sounding, 280 fm; wind, 320°, force 5; weather, missing; sea, rough; wire angle, 40°.										
1	16.28	33.68	5.54	326	0	(16.28)	(33.68)	(5.54)	(24.69)	(326)	(0.00)
9	16.28	33.68	5.58	326	10	16.28	33.68	5.58	24.69	326	0.03
24	16.17	33.67	5.57	324	20	16.23	33.68	5.57	24.70	325	0.07
38	15.28	33.59	5.36	312	30	15.90	33.65	5.52	24.75	321	0.10
58	12.93	33.53	4.70	269	50	13.40	33.53	4.84	25.20	278	0.16
75	12.32	33.58	4.42	254	75	12.32	33.58	4.42	25.45	254	0.22
93	11.21	33.63	3.94	231	100	10.94	33.67	3.76	25.78	223	0.28
124	10.11	33.80	3.21	200	125	10.09	33.80	3.20	26.02	200	0.34
156	9.64	33.87	3.00	187	150	9.70	33.86	3.05	26.13	189	0.39
200	9.23	33.91	2.54	178	200	9.23	33.91	2.54	26.25	178	0.48
244	8.79	34.08	1.81	158	250	8.73	34.09	1.74	26.47	157	0.57
343	7.78	34.22	0.91	133	300	8.22	34.16	1.30	26.60	144	0.64
80.55	ORCA; December 11, 1959; 0023 GCT; 34°14.5'N, 120°47'W; sounding, 440 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 20°.										
2	15.92	33.58	5.47	326	0	(15.92)	(33.58)	(5.47)	(24.69)	(326)	(0.00)
11	15.92	33.56	5.51	327	10	15.92	33.56	5.50	24.68	327	0.03
30	15.88	33.55	5.49	327	20	15.92	33.56	5.50	24.68	327	0.07
40	14.32	33.44	5.43	302	30	15.88	33.55	5.49	24.68	327	0.10
54	13.40	33.44	5.18	284	50	13.69	33.44	5.27	25.07	290	0.16
68	11.92	33.51	4.70	252	75	11.74	33.52	4.64	25.51	248	0.23
92	10.54	33.62	4.14	220	100	10.19	33.66	3.94	25.90	211	0.29
111	9.60	33.72	3.63	198	125	9.36	33.76	3.47	26.11	191	0.34
130	9.30	33.78	3.42	188	150	9.09	33.83	3.30	26.22	181	0.38
149	9.10	33.83	3.31	182	200	8.48	33.95	2.82	26.41	163	0.47
177	8.70	33.92	3.01	169	250	7.92	34.06	2.16	26.57	148	0.55
211	8.36	33.97	2.72	160	300	7.52	34.11	1.57	26.67	138	0.62
239	8.02	34.04	2.34	150	400	6.92	34.31	0.83	26.90	116	0.76
287	7.62	34.09	1.74	141	500	6.31	34.33	0.44	27.01	106	0.87
339	7.25	34.19	1.25	129	600	(5.68)	(34.37)		(27.11)	(96)	(0.98)
421	6.80	34.32	0.73	113							
505	6.27	34.33	0.43	106							
588	5.74	34.36	0.35	97							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{3}$ 10^{-5} cm/g	ΔD dyn. m

ORCA; December 10, 1959; 2036 GCT; 34°09'N, 121°10'W; sounding, 1300 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 15°. 80.60

0	15.68	33.58	5.39	320	0	15.68	33.58	5.39	24.75	320	0.00
10	15.68	33.60	5.22	318	10	15.68	33.60	5.22	24.77	318	0.03
30	15.66	33.60	5.19	318	20	15.67	33.60	5.21	24.77	318	0.06
59	14.27	33.46	4.95	300	30	15.66	33.60	5.19	24.78	318	0.10
69	12.39	33.33	4.60	274	50	15.60	33.60	5.16	24.79	317	0.16
83	11.09	33.46	4.06	241	75	11.30	33.35	4.19	25.47	252	0.23
97	9.93	33.56	3.97	214	100	9.80	33.58	3.91	25.90	211	0.29
112	9.54	33.66	3.66	201	125	9.25	33.77	3.32	26.13	189	0.34
136	9.04	33.81	3.22	182	150	8.82	33.84	3.20	26.27	176	0.39
155	8.74	33.86	3.19	174	200	8.15	34.02	2.89	26.50	154	0.47
185	8.36	33.99	2.92	159	250	7.59	34.10	2.30	26.65	140	0.54
213	8.00	34.04	2.88	150	300	7.12	34.14	1.40	26.75	130	0.62
242	7.70	34.09	2.47	142	400	6.62	34.27	0.65	26.91	115	0.74
291	7.12	34.12	1.53	132	500	6.01	34.30	0.38	27.03	104	0.86
345	7.11	34.25	0.96	122	600	(5.33)	(34.35)	(0.36)	(27.15)	(93)	(0.96)
430	6.35	34.25	0.52	111							
514	5.92	34.31	0.36	102							
598	5.34	34.35	0.36	93							

ORCA; December 10, 1959; 1503 GCT; 33°55'N, 121°48.5'W; sounding, 2000 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 23°. 80.70

2	15.45	33.68	5.61	308	0	(15.45)	(33.68)	(5.61)	(24.88)	(308)	(0.00)
10	15.45	33.68	5.56	308	10	15.45	33.68	5.56	24.88	308	0.03
30	15.44	33.65	5.50	310	20	15.45	33.67	5.53	24.87	309	0.06
39	15.45	33.69	5.52	308	30	15.44	33.65	5.50	24.86	310	0.09
52	11.70	33.50	4.06	249	50	12.10	33.51	4.19	25.44	255	0.15
66	10.70	33.55	3.89	228	75	10.19	33.58	3.82	25.83	218	0.21
87	9.64	33.60	3.68	207	100	9.48	33.74	3.24	26.08	194	0.26
105	9.42	33.80	3.14	189	125	8.90	33.88	3.06	26.28	175	0.31
122	8.98	33.87	3.07	177	150	8.52	33.95	2.77	26.39	164	0.35
139	8.62	33.91	3.00	169	200	7.84	34.08	2.50	26.59	145	0.43
161	8.42	34.00	2.52	159	250	6.91	34.13	2.30	26.77	128	0.50
192	8.00	34.07	2.47	148	300	6.37	34.10	1.72	26.82	124	0.56
218	7.48	34.09	2.55	139	400	5.80	34.19	0.81	26.96	110	0.68
261	6.76	34.13	2.16	126	500	5.34	34.28	0.44	27.09	98	0.79
309	6.30	34.10	1.64	123							
385	5.90	34.18	0.87	112							
464	5.42	34.24	0.55	102							
545	5.27	34.34	0.25	93							

ORCA; December 9, 1959; 1407 GCT;[a] 34°14'N, 119°59'W; sounding, 313 fm; wind, direction missing, force 1; weather, partly cloudy; sea, slight; wire angle, 02°. 82.47

426	6.87	34.27	0.35	118
436	6.82	34.27	0.37	117
446	6.78	34.27	0.19	116
456	6.72	34.25	0.22	117
466	6.64	34.26	0.06	116
476	6.62	34.26	0.05	115
486	6.59	34.28	0.04	113
496	6.55	34.29	-	112
506	6.55	34.29	0.05	112
515	6.52	34.30	-	111
525	6.50	34.27	-	113
535	6.52	34.28	0.03	112
545	6.50	34.29	-	111
555	6.50	34.27	-	113
565	6.48	34.27	-	112
575	6.49	34.27	-	112

a) Test cast.

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5912

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

83.43 ORCA; December 11, 1959; 1333 GCT; 34°07.5'N, 119°34.5'W; sounding, 135 fm; wind, 040°, force 3; weather, missing; sea, slight; wire angle, 06°.

1	16.65	33.69	5.50	334	0	(16.65)	(33.69)	(5.50)	(24.61)	(334)	(0.00)
11	16.53	33.64	5.49	335	10	16.55	33.65	5.49	24.60	335	0.03
31	15.54	33.57	5.40	318	20	16.12	33.61	5.46	24.67	328	0.07
50	14.66	33.52	5.20	304	30	15.57	33.57	5.41	24.77	319	0.10
75	13.54	33.51	4.70	282	50	14.66	33.52	5.20	24.93	304	0.16
100	11.86	33.58	4.61u	246	75	13.54	33.51	4.70	25.15	282	0.23
125	10.10	33.73	3.47	205	100	11.86	33.58		25.53	246	0.30
165	9.42	33.91	2.55	180	125	10.10	33.73	3.47	25.96	205	0.36
204	8.99	34.07	1.92	162	150	9.65	33.85	2.86	26.13	189	0.41
					200	9.04	34.05	2.00	26.39	164	0.50

83.60 ORCA; December 12, 1959; 0126, 0208 GCT; 33°30.5'N, 120°43.5'W; sounding, 1100 fm; wind, 310°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°, 25°.

2	15.92	33.51	5.48	331	0	(15.92)	(33.51)	(5.48)	(24.64)	(331)	(0.00)
11	15.90	33.53	5.50	329	10	15.91	33.53	5.49	24.66	329	0.03
35	15.85	33.51	5.32	329	20	15.89	33.52	5.45	24.66	329	0.07
45	14.09	33.29	5.09	309	30	15.87	33.52	5.36	24.66	329	0.10
58	11.89	33.19	4.76	275	50	12.90	33.21	4.91	25.08	292	0.16
73	10.98	33.26	4.55	254	75	10.93	33.27	4.53	25.47	252	0.23
96	10.25	33.48	4.06	226	100	10.08	33.53	3.95	25.81	220	0.29
116	9.40	33.67	3.64	198	125	9.19	33.72	3.53	26.11	191	0.34
135	9.03	33.75	3.45	187	150	8.86	33.79	3.31	26.22	181	0.39
165	8.70	33.84	3.23	175	200	8.30	33.96	3.01	26.44	160	0.48
193	8.38	33.95	3.11	162	250	7.60	34.05	2.08	26.60	144	0.55
231	7.88	34.00	2.37	151	300	7.24	34.11	1.50	26.70	135	0.62
					400	6.47	34.15	0.92	26.85	121	0.76
247	7.64	34.04	2.14	145	500	5.99	34.27	0.36	27.01	106	0.88
293	7.30	34.11	1.55	136	600	5.50	34.33	0.34	27.10	97	0.98
353	6.76	34.11	1.26	128							
447	6.22	34.22	0.55	113							
531	5.84	34.29	0.33	104							
604	5.48	34.33	0.34	96							

87.40 ORCA; December 12, 1959; 1843 GCT; 33°40'N, 118°58.5'W; sounding, 510 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 14°.

0	16.96	33.66	5.24	342	0	16.96	33.66	5.24	24.52	342	0.00
9	16.62	33.67	5.23	334	10	16.61	33.67	5.23	24.61	334	0.03
28	16.10	33.55	5.34	332	20	16.62	33.64	5.29	24.59	336	0.07
38	15.33	33.53	5.52	317	30	16.03	33.54	5.37	24.64	331	0.10
53	13.44	33.48	5.01	282	50	13.75	33.49	5.13	25.09	288	0.16
68	12.87	33.52	4.65	268	75	12.46	33.54	4.42	25.39	259	0.23
91	11.44	33.59	4.08	238	100	10.92	33.62	4.02	25.74	226	0.29
111	10.35	33.66	3.96	214	125	9.82	33.75	3.73	26.03	199	0.35
130	9.66	33.79	3.59	193	150	9.30	33.84	3.29	26.19	184	0.40
149	9.31	33.84	3.30	184	200	8.78	34.04	2.32	26.43	161	0.48
177	8.98	33.96	2.72	170	250	8.29	34.17	1.65	26.60	145	0.56
212	8.68	34.07	2.16	158	300	7.84	34.23	1.28	26.72	133	0.63
241	8.37	34.14	1.74	148	400	7.20	34.31	0.75	26.87	119	0.76
290	7.92	34.22	1.35	136	500	6.49	34.31	0.12	26.96	110	0.88
344	7.57	34.27	1.14	127	600	(5.78)	(34.42)	(0.04)	(27.14)	(93)	(0.99)
426	6.98	34.31	0.54	116							
509	6.42	34.31	0.06	109							
592	5.84	34.40	0.04	95							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

87.60

ORCA; December 12, 1959; 0653 GCT; 33°00.5'N, 120°21.5'W; sounding, 600 fm; wind, 330°, force 4; weather, clear; sea, very rough; wire angle, 08°.

2	16.75	33.64	5.37	339	0	(16.75)	(33.64)	(5.37)	(24.56)	(339)	(0.00)
12	16.76	33.64	5.42	339	10	16.76	33.64	5.41	24.56	339	0.03
37	16.74	33.64	5.37	339	20	16.76	33.64	5.41	24.56	339	0.07
47	14.04	33.44	5.51	297	30	16.75	33.64	5.39	24.56	339	0.10
61	12.94	33.47	5.19	273	50	13.77	33.46	5.48	25.07	290	0.16
76	11.88	33.51	4.51	252	75	11.96	33.51	4.57	25.46	253	0.23
100	10.42	33.68	3.80	214	100	10.42	33.68	3.80	25.87	214	0.29
121	9.90	33.74	3.48	201	125	9.80	33.76	3.40	26.04	198	0.34
140	9.41	33.85	3.15	185	150	9.26	33.86	3.09	26.21	182	0.39
170	8.97	33.88	2.92	176	200	8.56	34.00	2.57	26.43	161	0.48
200	8.56	34.00	2.57	161	250	7.88	34.14	1.70	26.64	140	0.56
239	8.05	34.13	1.85	144	300	7.40	34.18	1.30	26.74	131	0.63
269	7.61	34.16	1.48	136	400	6.70	34.31	0.66	26.95	112	0.75
319	7.27	34.20	1.15	128	500	6.02	34.31	0.38	27.03	104	0.87
383	6.83	34.31	0.75	114	600	5.62	34.35	0.32	27.11	96	0.97
483	6.10	34.31	0.40	105							
572	5.72	34.34	0.34	98							
647	5.43	34.38	0.29	92							

90.28

ORCA; December 13, 1959; 1222 GCT; 33°27'N, 117°46'W; sounding, 165 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°.

1	17.44	33.70	5.21	350	0	(17.44)	(33.70)	(5.21)	(24.44)	(350)	(0.00)
11	17.58	33.73	5.16	351	10	17.58	33.73	5.16	24.43	351	0.04
31	17.26	33.69	5.10	347	20	17.49	33.72	5.11	24.44	350	0.07
51	16.52a)	33.58	5.17	339	30	17.30	33.69	5.10	24.47	347	0.11
75	14.04	33.50	4.95	293	50	16.61	33.59	5.17	24.55	340	0.17
100	12.98	33.53	4.48	270	75	14.04	33.50	4.95	25.04	293	0.25
125	11.64	33.60	4.05	240	100	12.98	33.53	4.48	25.28	270	0.32
165	10.44	33.71	3.47	212	125	11.64	33.60	4.05	25.59	240	0.39
205	9.40	33.93	2.53	179	150	10.81	33.67	3.70	25.80	221	0.45
254	9.04	34.13	1.67	159	200	9.51	33.90	2.66	26.20	183	0.55
					250	9.07	34.11	1.75	26.43	160	0.64

90.32

ORCA; December 16, 1959; 0214 GCT; 33°20.5'N, 118°03'W; sounding, 440 fm; wind, 220°, force 1; weather, partly cloudy; sea, slight; wire angle, 04°.

1	16.38	33.61	5.34	334	0	(16.38)	(33.61)	(5.34)	(24.61)	(334)	(0.00)
11	16.36	33.61	5.42	333	10	16.36	33.61	5.42	24.62	333	0.03
31	16.28	33.62	5.38	330	20	16.33	33.61	5.41	24.63	332	0.07
61	12.69	33.40	4.75	274	30	16.29	33.62	5.39	24.64	331	0.10
71	11.84	33.46	4.54	254	50	16.03	33.60	5.34	24.69	326	0.17
86	11.13	33.54	4.11	236	75	11.70	33.48	4.46	25.49	250	0.24
102	10.87	33.57	3.99	229	100	10.90	33.56	4.00	25.70	230	0.30
117	10.21	33.69	3.64	210	125	10.03	33.72	3.56	25.96	205	0.35
142	9.74	33.77	3.42	196	150	9.63	33.81	3.26	26.10	192	0.40
162	9.48	33.89	2.87	183	200	9.04	34.06	2.24	26.40	163	0.49
192	9.08	34.01	2.41	168	250	8.64	34.21	1.45	26.58	147	0.57
220	8.96	34.18	1.79	154	300	8.00	34.22	1.33	26.69	136	0.65
250	8.64	34.21	1.45	147	400	7.12	34.32	0.75	26.89	117	0.78
300	8.00	34.22	1.33	136	500	6.26	34.37	0.37	27.04	103	0.89
356	7.51	34.29	0.91	125	600	5.71	34.40	0.26	27.13	94	1.00
440	6.72	34.33	0.62	111							
525	6.08	34.39	0.29	99							
610	5.68	34.40	0.25	93							

a) Alternate value, 16.91°C, not used in interpolation.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5}^{3} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

90.37 ORCA; December 16, 1959; 0530 GCT; 33°08.5'N, 118°23'W; sounding, 520 fm; wind, 220°, force 1; weather, partly cloudy; sea, slight; wire angle, 08°.

2	16.24	33.58	5.26	332	0	(16.24)	(33.58)	(5.26)	(24.63)	(332)	(0.00)
12	16.24	33.58	5.39	332	10	16.24	33.58	5.37	24.63	332	0.03
32	15.74	33.58	5.24	322	20	16.23	33.58	5.39	24.63	332	0.07
42	15.26	33.58	5.15	312	30	16.00	33.58	5.31	24.68	327	0.10
56	13.90	33.54	4.92	287	50	14.30	33.55	5.01	25.03	294	0.16
71	12.77	33.53	4.52	266	75	12.70	33.56	4.46	25.36	262	0.23
96	11.38	33.59	4.08	236	100	11.12	33.60	3.97	25.70	230	0.29
116	10.38	33.66	3.59	214	125	10.32	33.68	3.53	25.89	212	0.35
135	10.26	33.70	3.54	209	150	9.82	33.74	3.31	26.02	200	0.40
155	9.62	33.75	3.28	196	200	8.89	33.96	2.43	26.34	169	0.50
185	9.00	33.88	2.80	176	250	8.52	34.14	1.58	26.54	150	0.58
220	8.78	34.05	1.95	160	300	8.07	34.29	1.10	26.72	133	0.65
250	8.52	34.14	1.58	150	400	7.13	34.29	0.75	26.87	119	0.78
299	8.08	34.29	1.10	133	500	6.53	34.31	0.47	26.96	110	0.90
353	7.48	34.33	0.88	121	600	5.88	34.34	0.27	27.07	100	1.01
438	6.90	34.27	0.61	118							
522	6.38	34.33	0.41	107							
606	5.84	34.34	0.26	100							

90.45 ORCA; December 16, 1959; 0939 GCT; 32°55.5'N, 118°56'W; sounding, 1000 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 04°.

1	15.64	33.58	5.47	319	0	(15.64)	(33.58)	(5.47)	(24.76)	(319)	(0.00)
11	15.64	33.58	5.48	319	10	15.64	33.58	5.48	24.76	319	0.03
31	15.51	33.57	5.50	317	20	15.60	33.58	5.49	24.77	319	0.06
62	15.40	33.58	5.43	315	30	15.53	33.57	5.50	24.78	318	0.10
71	13.15	33.48	4.93	277	50	15.44	33.58	5.47	24.80	316	0.16
86	11.95	33.56	4.42	249	75	13.02	33.51	4.84	25.26	272	0.23
100	10.88	33.61	4.04	226	100	10.88	33.61	4.04	25.74	226	0.30
115	10.28	33.68	3.72	212	125	9.98	33.73	3.51	25.98	203	0.35
140	9.51	33.81	3.15	189	150	9.45	33.86	2.99	26.18	185	0.40
160	9.40	33.91	2.81	180	200	8.84	34.03	2.27	26.41	163	0.49
190	8.98	34.00	2.40	167	250	8.33		1.74			
220	8.58	34.09	2.01	154	300	8.07		1.31			
250	8.33	-	1.74		400	7.18		0.87			
300	8.07	-	1.31		500	6.49		0.49			
355	7.53	-	1.08		600	5.83		0.33			
440	6.92	-	0.63								
525	6.32	-	0.44								
610	5.78	-	0.31								

90.50 ORCA; December 16, 1959; 1250 GCT; 32°46.5'N, 119°16.5'W; sounding, 220 fm; wind, 220°, force 1; weather, overcast; sea, moderate; wire angle, 03°.

1	15.58	5.46	0	(15.58)	(5.46)
11	15.57	5.51	10	15.57	5.51
31	15.52	5.46	20	15.56	5.50
51	15.15	5.34	30	15.54	5.47
76	11.69	4.37	50	15.20	5.35
101	10.62	3.95	75	11.78	4.41
126	9.73	3.36	100	10.68	3.97
165	9.10	2.54	125	9.79	3.39
205	8.64	1.95	150	9.30	2.80
255	8.36	1.41	200	8.70	2.02
305	7.78	1.29	250	8.40	1.45
			300	7.86	1.30

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

ORCA; December 16, 1959; 1553 GCT; 32°37'N, 119°38'W; sounding, 550 fm; wind, 230°, force 2; weather, cloudy; sea, moderate; wire angle, 12°. 90.55

1	15.45	-	5.42		0	(15.45)		(5.42)			
11	15.46	-	5.40		10	15.46		5.41			
30	15.46	-	5.46		20	15.46		5.42			
40	15.46	-	5.46		30	15.46		5.46			
50	14.55	-	5.16		50	14.55		5.16			
64	13.22	-	5.05		75	12.82		4.94			
79	12.70	-	4.88		100	11.18		4.11			
98	11.28	-	4.24		125	10.12		3.50			
122	10.24	-	3.54		150	9.50		2.83			
141	9.68	-	2.95		200	8.74		2.08			
170	9.15	-	2.60		250	8.40		1.43			
200	8.74	-	2.08		300	7.73		1.27			
229	8.55	34.31	1.56	138	400	6.84		0.76			
268	8.22	34.27	1.33	136	500	6.14		0.41			
327	7.30	34.20	1.18	129							
400	6.84	34.24	0.76	120							
474	6.31	34.32	0.45	107							
555	5.86	34.38	0.37	97							

ORCA; December 16, 1959; 1855 GCT; 32°25'N, 119°58'W; sounding, 530 fm; wind, 220°, force 2; weather, cloudy; sea, moderate; wire angle, 15°. 90.60

1	15.86	-	-		0	(15.86)	(33.62)		(24.74)	(321)	(0.00)
10	15.9	-	-		10	15.9	(33.62)		(24.73)	(322)	(0.03)
30	15.92	33.62	5.49	322	20	15.9	(33.62)		(24.73)	(322)	(0.06)
39	15.84	33.63	5.43	320	30	15.92	33.62	5.49	24.73	322	(0.10)
54	15.02	33.58	5.30	306	50	15.42	33.61	5.36	24.83	313	(0.16)
69	12.80	33.57	4.70	264	75	12.50	33.55	4.62	25.39	260	(0.23)
92	11.39	33.70a)	3.77	229	100	11.12	33.72	3.57	25.78	222	(0.29)
111	10.72	33.75	3.30	214	125	10.40	33.82	3.02	25.99	203	(0.35)
130	10.31	33.86	2.93	198	150	10.11	33.90	2.77	26.09	193	(0.40)
149	10.12	33.89	2.78	194	200	9.61	34.03	2.37	26.28	175	(0.49)
176	9.82	33.96	2.57	184	250	9.32	34.18	1.86	26.45	159	(0.58)
210	9.53	34.06	2.26	171	300	8.99	34.24	1.54	26.55	149	(0.66)
239	9.38	34.16	1.94	162	400	7.52	34.24	1.03	26.78	128	(0.80)
287	9.10	34.24	1.60	152	500	6.35	34.33	0.49	27.00	107	(0.92)
343	8.38	34.23	1.33	141	600	(5.74)	(34.36)	(0.38)	(27.10)	(97)	(1.03)
425	7.14	34.25	0.90	122							
510	6.26	34.34	0.46	105							
594	5.76	34.36	0.38	97							

ORCA; December 17, 1959; 0013 GCT; 32°04.5'N, 120°38'W; sounding, 2150 fm; wind, 150°, force 1; weather, cloudy; sea, very rough; wire angle, 13°. 90.70

1	15.82	33.48	5.36	331	0	(15.82)	(33.48)	(5.36)	(24.64)	(331)	(0.00)
10	15.74	33.60	5.48	320	10	15.74	33.60	5.48	24.75	320	0.03
30	15.68	33.53	5.44	324	20	15.71	33.56	5.46	24.73	322	0.06
59	14.04	33.47	5.44	295	30	15.68	33.53	5.44	24.71	324	0.10
69	12.29	33.21	5.23	281	50	15.60	33.52	5.44	24.72	323	0.16
83	11.66	33.33	4.94	260	75	11.99	33.26	5.09	25.26	272	0.24
98	10.76	33.42	4.51	238	100	10.67	33.43	4.45	25.64	236	0.30
112	10.16	33.60	3.93	215	125	9.62	33.69	3.70	26.02	200	0.36
136	9.19	33.75	3.63	189	150	8.90	33.84	3.50	26.25	178	0.40
155	8.80	33.87	3.47	174	200	8.17	34.02	2.42	26.50	154	0.49
183	8.38	33.98	2.57	160	250	7.64	34.10	1.87	26.64	141	0.56
212	8.02	34.04	2.36	150	300	7.19	34.17	1.30	26.76	130	0.63
242	7.72	34.09	1.86	143	400	6.51	34.20	0.66	26.88	118	0.76
290	7.25	34.14	1.37	131	500	5.94	34.34	0.40	27.06	101	0.88
345	6.92	34.18	0.92	125	600	(5.48)	(34.34)	(0.35)	(27.12)	(95)	(0.98)
428	6.28	34.23	0.52	113							
512	5.88	34.35	0.39	99							
596	5.50	34.34	0.35	96							

a) Possible evaporation; value falls on property curve.

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OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

90.80 ORCA; December 17, 1959; 0535 GCT; 31°45'N, 121°13'W; sounding, 2150 fm; wind, 250°, force 1; weather, cloudy; sea, moderate; wire angle, 07°.

1	15.69	33.44	5.51	331	0	(15.69)	(33.44)	(5.51)	(24.64)	(331)	(0.00)
11	15.66	33.43	5.56	331	10	15.67	33.43	5.55	24.64	331	0.03
31	15.62	33.44	5.55	329	20	15.64	33.43	5.56	24.65	330	0.07
61	15.00	33.38	5.50	321	30	15.63	33.44	5.55	24.66	329	0.10
70	12.58	33.14	5.35	291	50	15.57	33.44	5.54	24.67	328	0.16
85	11.78	33.27	4.95	267	75	12.44	33.15	5.32	25.09	288	0.24
100	10.98	33.44	4.52	240	100	10.98	33.44	4.52	25.59	240	0.31
115	10.18	33.55	4.19	219	125	9.79	33.61	4.06	25.92	209	0.37
140	9.24	33.73	3.84	191	150	9.09	33.76	3.80	26.16	187	0.42
159	8.98	33.80	3.75	182	200	8.22	33.98	2.78	26.46	158	0.50
188	8.39	33.94	3.02	163	250	7.63	34.08	1.66	26.63	142	0.58
217	7.99	34.01	2.49	152	300	7.18	34.19	1.24	26.78	127	0.65
247	7.66	34.07	1.72	143	400	6.38	34.19	0.80	26.89	117	0.78
295	7.22	34.19	1.29	128	500	5.76	34.27	0.41	27.03	104	0.89
350	6.66	34.18	0.97	122	600	5.22	34.31	0.39	27.12	95	1.00
435	6.22	34.22	0.62	113							
519	5.60	34.29	0.37	100							
604	5.21	34.31	0.39	95							

90.90 ORCA; December 17, 1959; 1053 GCT; 31°26'N, 121°49'W; sounding, 2000+ fm; wind, 250°, force 1; weather, cloudy; sea, moderate; wire angle, 04°.

1	16.10	33.40	5.46	343	0	(16.10)	(33.40)	(5.46)	(24.51)	(343)	(0.00)
11	16.10	33.39	5.50	344	10	16.10	33.39	5.50	24.50	344	0.03
31	16.07	33.40	5.50	342	20	16.09	33.40	5.50	24.51	343	0.07
61	14.94	33.37	5.64	320	30	16.08	33.40	5.50	24.52	342	0.10
71	14.04	33.30	5.52	307	50	16.06	33.40	5.50	24.53	341	0.17
86	13.22	33.35	5.34	288	75	13.79	33.31	5.47	24.95	301	0.25
100	12.31	33.39	5.05	268	100	12.31	33.39	5.05	25.32	268	0.32
115	11.60	33.46	4.76	250	125	11.10	33.51	4.60	25.62	238	0.39
140	10.34	33.59	4.40	219	150	9.99	33.65	4.30	25.92	209	0.44
159	9.68	33.71	4.18	200	200	8.73	33.87	3.58	26.30	173	0.54
189	8.91	33.82	3.72	180	250	7.84	33.97	2.74	26.51	153	0.63
219	8.42	33.93	3.35	164	300	7.11	34.05	1.80	26.68	137	0.70
249	7.86	33.97	2.75	153	400	6.18	34.14	0.95	26.87	119	0.84
298	7.14	34.05	1.83	137	500	5.68	34.23	0.46	27.01	106	0.95
353	6.50	34.09	1.26	126	600	5.11	34.31	0.31	27.14	94	1.06
437	5.98	34.18	0.70	113							
522	5.56	34.24	0.43	104							
606	5.08	34.32	0.30	93							

90.100 ORCA; December 17, 1959; 1555 GCT; 31°07'N, 122°26'W; sounding, 2000+ fm; wind, 250°, force 1; weather, cloudy; sea, moderate; wire angle, 08°.

1	16.40	33.39	5.18	350	0	(16.40)	(33.39)	(5.18)	(24.44)	(350)	(0.00)
11	16.40	33.37	5.28	352	10	16.40	33.38	5.27	24.43	351	0.04
31	16.38	33.39	5.26	350	20	16.40	33.38	5.27	24.43	351	0.07
60	16.39	33.39	5.25	350	30	16.39	33.39	5.26	24.44	350	0.11
70	16.39	33.39	5.26	350	50	16.39	33.39	5.26	24.44	350	0.18
85	14.25	33.33	5.39	309	75	14.80	33.35	5.37	24.77	319	0.26
99	12.72	33.23	5.17	288	100	12.68	33.23	5.16	25.10	287	0.34
114	11.72	33.35	4.82	260	125	11.20	33.42	4.58	25.53	246	0.40
139	10.56	33.52	4.22	228	150	10.13	33.65	4.22	25.90	211	0.46
159	9.80	33.77	4.21	197	200	8.87	33.90	3.73	26.30	173	0.56
189	9.05	33.87	3.81	178	250	8.12	34.04	3.07	26.52	152	0.64
219	8.57	33.93	3.60	166	300	7.31	34.05	2.13	26.65	140	0.72
248	8.14	34.04	3.09	152	400	6.45	34.23	0.91	26.91	115	0.85
298	7.34	34.05	2.14	140	500	5.66	34.30	0.46	27.07	100	0.96
352	6.82	34.16	1.39	126	600	5.18	34.39	0.37	27.20	88	1.06
436	6.14	34.26	0.62	109							
520	5.52	34.31	0.44	98							
606	5.16	34.40	0.36	87							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δ_{T}	Z	T	S	O_2	σ_t	δ_{T}	ΔD
m	°C	‰	ml/L	10^{-5} cm^3/g	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

ORCA; December 19, 1959; 1415 GCT; 32°55'N, 117°21.5'W; sounding, 285 fm; wind, 340°, force 1; weather, light fog; sea, slight; wire angle, 04°. 93.28

1	16.72	33.59	5.42	342	0	(16.72)	(33.59)	(5.42)	(24.52)	(342)	(0.00)
11	16.74	33.60	5.39	342	10	16.74	33.60	5.39	24.52	342	0.03
31	16.68	33.60	5.43	341	20	16.72	33.60	5.41	24.53	342	0.07
51	14.80	33.54	5.57	305	30	16.70	33.60	5.42	24.54	341	0.10
75	13.00	33.55	4.87	269	50	14.95	33.54	5.57	24.88	308	0.17
100	11.34	33.60	4.27	235	75	13.00	33.55	4.87	25.29	269	0.24
125	10.30	33.65	3.76	214	100	11.34	33.60	4.27	25.65	235	0.30
165	9.38	33.80	3.09	188	125	10.30	33.65	3.76	25.87	214	0.36
205	9.12	34.02	2.19	168	150	9.64	33.72	3.39	26.03	198	0.41
255	8.74	34.14	1.62	153	200	9.15	34.00	2.28	26.34	169	0.51
305	8.26	34.20	1.24	142	250	8.79	34.13	1.68	26.49	155	0.59
409	7.24	34.24	0.78	125	300	8.32	34.19	1.30	26.62	143	0.67
					400	7.32	34.24	0.82	26.80	126	0.81

ORCA; December 19, 1959; 1057 GCT; 32°49.5'N, 117°32'W; sounding, 493 fm; wind, 310°, force 1; weather, partly cloudy; sea, missing; wire angle, 08°. 93.30

1	16.62	33.53	5.50	345	0	(16.62)	(33.53)	(5.50)	(24.49)	(345)	(0.00)
11	16.62	33.53	5.48	345	10	16.62	33.53	5.48	24.49	345	0.03
31	16.68	33.61	5.49	340	20	16.66	33.58	5.48	24.51	343	0.07
41	16.50	33.61	5.48	336	30	16.68	33.61	5.49	24.54	340	0.10
51	15.88	33.53	5.49	322	50	16.19	33.59	5.49	24.64	331	0.17
66	14.42	33.43	5.48	306	75	13.71	33.45	5.23	25.07	290	0.25
80	13.36	33.48	5.04	281	100	12.09	33.59	4.33	25.50	249	0.32
100	12.09	33.59	4.33	249	125	11.38	33.64	3.99	25.67	233	0.38
124	11.40	33.64	4.00	233	150	10.34	33.65	3.70	25.86	215	0.43
144	10.58	33.64	3.78	219	200	9.23	33.92	2.79	26.26	177	0.53
173	9.62	33.78	3.23	194	250	8.78	34.11	1.79	26.48	156	0.62
202	9.20	33.93	2.76	176	300	8.44	34.21	1.26	26.60	144	0.70
231	8.88	34.03	2.20	164	400	7.43	34.27	0.84	26.80	125	0.84
270	8.69	34.18	1.47	150	500	6.36	34.30	0.39	26.98	109	0.96
329	8.14	34.23	1.11	138							
403	7.39	34.27	0.81	124							
475	6.60	34.29	0.46	113							
557	5.94	34.34	0.27	101							

ORCA; December 19, 1959; 0745 GCT; 32°39.5'N, 117°47.5'W; sounding, 360 fm; wind, 280°, force 1; weather, cloudy; sea, moderate; wire angle, 04°. 93.35

1	16.58	33.63	5.15	336	0	(16.58)	(33.63)	(5.15)	(24.59)	(336)	(0.00)
11	16.57	33.68	5.21	333	10	16.57	33.67	5.21	24.62	333	0.03
31	16.54	33.68	5.22	332	20	16.57	33.68	5.21	24.63	332	0.07
41	16.42	33.66	5.22	331	30	16.55	33.68	5.22	24.63	332	0.10
56	14.22	33.53	5.02	294	50	14.68	33.53	5.10	24.93	304	0.16
71	13.70	33.53	4.77	284	75	13.59	33.53	4.72	25.16	281	0.24
96	12.97	33.61	4.34	264	100	12.83	33.63	4.22	25.39	259	0.30
116	12.30	33.69	3.92	246	125	11.68	33.65	3.94	25.62	237	0.37
136	10.60	33.58	3.96	224	150	10.04	33.64	3.76	25.91	210	0.42
156	9.88	33.68	3.62	205	200	8.96	33.94	2.65	26.32	171	0.52
185	9.24	33.87	2.90	181	250	8.70	34.16	1.55	26.53	151	0.60
220	8.70	34.02	2.33	162	300	8.16	34.22	1.16	26.66	139	0.68
250	8.70	34.16	1.55	151	400	7.23	34.26	0.76	26.83	123	0.82
300	8.16	34.22	1.16	139	500	6.50	34.30	0.52	26.96	110	0.94
355	7.56	34.24	0.89	129	600	5.80	34.34	0.33	27.08	99	1.05
439	6.96	34.29	0.65	117							
524	6.30	34.31	0.45	107							
609	5.74	34.34	0.32	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	δ_{T_3}	Z	T	S	O_2	σ_t	δ_{T_3}	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

93.40 ORCA; December 19, 1959; 0425 GCT; 32°27.5'N, 118°10.5'W; sounding, 900 fm; wind, 280°, force 1; weather, partly cloudy; sea, moderate; wire angle, 11°.

1	16.62	33.58	5.30	341	0	(16.62)	(33.58)	(5.30)	(24.54)	(341)	(0.00)
10	16.64	33.57	5.38	342	10	16.64	33.57	5.38	24.52	342	0.03
30	16.54	33.62	5.37	336	20	16.61	33.60	5.38	24.56	339	0.07
40	16.31	33.62	5.42	331	30	16.54	33.62	5.37	24.59	336	0.10
54	13.25	33.44	5.11	282	50	13.60	33.42	5.22	25.07	290	0.16
69	12.30	33.55	4.51	255	75	12.02	33.59	4.35	25.51	248	0.23
94	11.24	33.63	4.00	231	100	11.01	33.64	3.94	25.74	227	0.29
114	10.47	33.68	3.81	215	125	10.12	33.79	3.60	26.01	201	0.35
133	9.91	33.82	3.46	195	150	9.58	33.84	3.19	26.14	188	0.40
152	9.55	33.84	3.18	188	200	9.04	34.00	2.54	26.35	168	0.49
182	9.20	33.94	2.75	175	250	8.43	34.15	1.77	26.56	148	0.57
217	8.88	34.05	2.31	162	300	8.14	34.25	1.16	26.69	136	0.64
246	8.46	34.14	1.82	149	400	7.01	34.32	0.66	26.90	116	0.77
295	8.18	34.24	1.21	138	500	6.29	34.32	0.42	27.01	106	0.89
344	7.62	34.32	0.97	124	600	5.75	34.40	0.33	27.13	94	0.99
433	6.73	34.32	0.54	112							
518	6.17	34.33	0.40	104							
602	5.74	34.39	0.32	94							

93.50 ORCA; December 18, 1959; 2242 GCT; 32°07'N, 118°53.5'W; sounding, 810 fm; wind, 290°, force 3; weather, partly cloudy; sea, rough; wire angle, 14°.

0	16.23	33.61	5.52	330	0	16.23	33.61	5.52	24.65	330	0.00
9	16.06	33.64	5.52	324	10	16.05	33.64	5.52	24.71	324	0.03
28	16.01	33.61	5.46	325	20	16.02	33.62	5.47	24.70	325	0.07
58	14.24a)	33.62	5.45	288	30	16.01	33.61	5.46	24.70	325	0.10
68	13.62	33.53	5.18	282	50	15.94	33.61	5.46	24.72	323	0.16
82	12.57	33.48	4.78	266	75	13.05	33.50	4.97	25.29	273	0.24
96	11.40	33.52	4.36	242	100	11.05	33.57	4.18	25.68	232	0.30
111	10.46	33.67	3.82	215	125	10.00	33.75	3.48	26.00	202	0.36
135	9.77	33.78	3.35	196	150	9.50	33.83	3.19	26.14	188	0.41
154	9.43	33.84	3.15	186	200	8.85	34.07	2.32	26.44	160	0.49
183	9.00	33.96	2.68	170	250	8.29	34.14	1.88	26.58	147	0.57
211	8.74	34.11	2.15	155	300	7.89	34.19	1.56	26.67	138	0.65
240	8.36	34.13	1.93	148	400	7.10	34.27	0.85	26.85	121	0.78
289	8.00	34.18	1.64	140	500	6.44	34.29	0.52	26.96	110	0.90
343	7.42	34.20	1.21	130	600	(5.86)	(34.34)	(0.38)	(27.08)	(99)	(1.01)
427	6.94	34.29	0.73	117							
510	6.36	34.29	0.49	109							
594	5.88	34.34	0.38	100							

93.60 ORCA; December 18, 1959; 1627 GCT; 31°47'N, 119°32'W; sounding, 2050 fm; wind, 290°, force 1; weather, cloudy; sea, rough; wire angle, 05°.

1	16.46	33.45	5.42	347	0	(16.46)	(33.45)	(5.42)	(24.47)	(347)	(0.00)
11	16.44	33.46	5.39	346	10	16.44	33.46	5.39	24.48	346	0.03
31	16.42	33.43	5.39	348	20	16.43	33.45	5.39	24.47	347	0.07
56	15.93	33.35	5.55	342	30	16.42	33.43	5.39	24.46	348	0.10
66	13.00	33.25	5.28	291	50	16.41	33.43	5.40	24.46	348	0.17
76	12.76	33.46	4.95	271	75	12.79	33.45	4.97	25.26	272	0.25
91	12.12	33.51	4.77	256	100	11.40	33.53	4.50	25.58	241	0.32
106	10.82	33.54	4.21	231	125	9.82	33.64	3.82	25.94	207	0.37
130	9.62	33.68	3.73	201	150	9.02	33.79	3.23	26.19	184	0.42
150	9.02	33.79	3.23	184	200	8.24	33.99	2.47	26.47	157	0.51
175	8.57	33.91	2.83	168	250	7.74	34.05	2.19	26.59	146	0.59
205	8.19	34.00	2.43	156	300	7.36	34.18	1.35	26.74	131	0.66
235	7.89	34.02	2.36	150	400	6.69	34.23	0.66	26.88	118	0.79
274	7.52	34.12	1.76	138	500	5.97	34.32	0.36	27.04	103	0.90
334	7.16	34.21	1.00	126							
409	6.61	34.24	0.61	116							
484	6.07	34.31	0.38	104							
563	5.65	34.35	0.27	97							

a) Alternate value, 15.88°C, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^3 cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^3 cm/g	ΔD dyn. m

93.70

ORCA; December 18, 1959; 1035 GCT; 31°27'N, 120°14'W; sounding, 2250 fm; wind, direction missing, force 1; weather, cloudy; sea, rough; wire angle, 02°.

1	15.74	33.48	5.33	329	0	(15.74)	(33.48)	(5.33)	(24.66)	(329)	(0.00)
11	15.74	33.42	5.38	333	10	15.74	33.42	5.37	24.62	333	0.03
31	15.68	33.46	5.39	330	20	15.71	33.44	5.38	24.63	332	0.07
56	14.95	33.40	5.37	318	30	15.69	33.46	5.39	24.65	330	0.10
66	13.14	33.26	5.23	292	50	15.66	33.46	5.39	24.66	329	0.17
76	12.66	33.36	4.94	276	75	12.73	33.35	4.97	25.19	278	0.24
91	11.37	33.55	4.28	239	100	10.88	33.57	4.12	25.71	229	0.31
106	10.58	33.59	4.02	223	125	9.59	33.70	3.64	26.02	199	0.36
131	9.42	33.73	3.55	194	150	9.06	33.84	3.28	26.22	181	0.41
151	9.04	33.84	3.27	180	200	8.32	34.04	2.16	26.49	155	0.49
176	8.60	33.94	2.80	166	250	7.58	34.10	1.80	26.65	140	0.57
206	8.24	34.05	2.08	153	300	7.17	34.22	1.19	26.81	125	0.64
235	7.77	34.08	1.92	144	400	6.59	34.31	0.59	26.96	111	0.76
275	7.32	34.13	1.54	134	500	6.05	34.35	0.35	27.06	101	0.87
334	7.00	34.30	0.85	117							
409	6.52	34.31	0.54	110							
484	6.12	34.34	0.37	103							
564	5.80	34.38	0.27	96							

93.80

ORCA; December 18, 1959; 0528 GCT; 31°08'N, 120°55'W; sounding, 2250 fm; wind, direction missing, force 1; weather, cloudy; sea, rough; wire angle, 02°.

1	16.04	33.52	5.45	332	0	(16.04)	(33.52)	(5.45)	(24.63)	(332)	(0.00)
11	16.02	33.48	5.52	335	10	16.02	33.48	5.52	24.60	335	0.03
31	15.94	33.40	5.46	339	20	15.99	33.45	5.50	24.58	336	0.07
61	15.98	33.42	5.45	338	30	15.95	33.40	5.47	24.56	339	0.10
71	15.80	33.40	5.42	336	50	15.98	33.41	5.45	24.57	338	0.17
86	12.65	33.25	5.27	284	75	15.00	33.36	5.39	24.72	323	0.25
101	11.64	33.41	4.82	254	100	11.70	33.40	4.85	25.43	256	0.32
116	10.89	33.49	4.49	236	125	10.42	33.54	4.29	25.76	224	0.38
141	9.60	33.66	3.91	202	150	9.34	33.71	3.84	26.08	194	0.44
161	9.08	33.78	3.76	185	200	8.44	33.94	3.07	26.39	164	0.53
191	8.56	33.91	3.35	168	250	7.73	34.07	1.81	26.60	144	0.61
220	8.16	34.00	2.29	155	300	7.13	34.11	1.40	26.72	133	0.68
250	7.73	34.07	1.81	144	400	6.33	34.18	0.69	26.89	117	0.81
299	7.14	34.11	1.41	133	500	5.95	34.32	0.41	27.04	102	0.92
355	6.58	34.14	0.95	123	600	5.48	34.35	0.34	27.13	95	1.03
439	6.16	34.23	0.52	112							
525	5.84	34.34	0.38	100							
609	5.42	34.35	0.33	94							

93.90

ORCA; December 18, 1959; 0017 GCT; 30°49'N, 121°35'W; sounding, 2350 fm; wind, 250°, force 2; weather, cloudy; sea, very rough; wire angle, 10°.

1	16.99	33.55	5.30	351	0	(16.99)	(33.55)	(5.30)	(24.43)	(351)	(0.00)
11	16.96	33.54	5.42	351	10	16.97	33.54	5.41	24.43	351	0.04
30	16.87	33.53	5.34	350	20	16.93	33.53	5.38	24.44	350	0.07
59	16.79	33.53	5.39	348	30	16.87	33.53	5.34	24.44	350	0.11
70	16.54	33.53	5.40	343	50	16.83	33.53	5.35	24.45	349	0.18
85	15.68	33.53	5.63	324	75	16.18	33.53	5.52	24.60	335	0.26
100	14.48	33.39	5.60	310	100	14.48	33.39	5.60	24.86	310	0.34
114	14.08	33.55	5.38	290	125	13.30	33.52	5.23	25.21	277	0.42
137	11.52	33.42	4.84	251	150	10.78	33.54	4.62	25.70	230	0.48
157	10.48	33.60	4.51	220	200	9.13	33.80	3.97	26.18	184	0.59
186	9.40	33.76	4.15	192	250	8.08	34.01	2.67	26.50	154	0.67
215	8.88	33.84	3.76	177	300	7.35	34.03	2.09	26.63	142	0.75
244	8.18	33.99	2.76	156	400	6.33	34.17	1.00	26.88	118	0.89
292	7.46	34.02	2.20	144	500	5.69	34.22	0.54	27.00	107	1.00
347	6.84	34.12	1.40	128	600	(5.19)	(34.27)	(0.56)	(27.09)	(97)	(1.11)
431	6.09	34.19	0.82	114							
515	5.62	34.23	0.50	105							
597	5.20	34.27	0.56	98							

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OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T}{}^{-5}{}_{10}{}^{3}$	Z	T	S	O_2	σ_t	$\delta_{T}{}^{-5}{}_{10}{}^{3}$	ΔD
m	°C	‰	ml/L	cm/g	m	°C	‰	ml/L	g/L	cm/g	dyn. m
93.100	ORCA; December 17, 1959; 2018 GCT; 30°35.5'N, 122°03'W; sounding, 2300 fm; wind, 250°, force 3; weather, cloudy; sea, very rough; wire angle, 10°.										
0	17.10	33.57	5.33	353	0	17.10	33.57	5.33	24.41	353	0.00
10	17.04	33.58	5.39	350	10	17.04	33.58	5.39	24.44	350	0.04
30	17.02	33.55	5.35	352	20	17.03	33.57	5.37	24.43	351	0.07
60	17.03	33.55	5.33	352	30	17.02	33.55	5.35	24.42	352	0.11
68	17.02	33.56	5.34	351	50	17.03	33.55	5.34	24.42	352	0.18
83	16.96	33.54	5.35	351	75	17.01	33.55	5.34	24.43	351	0.26
98	16.58	33.86	5.47	320	100	16.50	33.86	5.46	24.78	318	0.35
113	15.56	33.81	5.33	301	125	14.05	33.64	5.19	25.15	282	0.42
137	12.16	33.42	5.05	263	150	11.37	33.48	4.68	25.55	244	0.49
156	11.07	33.51	4.53	238	200	9.41	33.77	4.04	26.12	191	0.60
186	9.83	33.68	4.29	204	250	8.34	33.98	3.17	26.45	159	0.69
215	9.01	33.86	3.71	178	300	7.70	34.12	2.40	26.65	140	0.77
244	8.42	33.96	3.25	162	400	6.51	34.18	1.04	26.86	120	0.91
293	7.79	34.11	2.51	142	500	5.77	34.30	0.44	27.05	102	1.02
348	7.08	34.13	1.54	131	600	(5.19)	(34.33)	(0.51)	(27.14)	(93)	(1.13)
431	6.23	34.22	0.84	113							
514	5.67	34.31	0.38	100							
597	5.20	34.33	0.51	93							

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
82.47-O	XII-11	0745	34°15.5'	119°58.5'	330	320°	3	missing	rough	16.70	33.69
83.40-O	11	1140	34°13.5'	119°21.5'	12	040°	3	missing	slight	16.96	33.77
83.51-O	11	1940	33°51.5'	120°07.5'	80	290°	3	partly cloudy	rough	16.23	33.69
83.55-O	11	2209	33°43.0'	120°23.5'	680	310°	4	partly cloudy	very rough	16.19	33.60
87.35-O	12	2132	33°48.5'	118°39.0'	470	320°	2	partly cloudy	moderate	16.96	33.76
87.45-O	12	1545	33°29.0'	119°18.0'	950	330°	2	partly cloudy	moderate	16.26	33.61
87.50-O	12	1315	33°19.5'	119°39.5'	42	-	1	missing	moderate	16.42	33.58
87.55-O	12	0950	33°12.0'	120°00.5'	630	330°	2	partly cloudy	very rough	16.84	33.62
93.45-O	19	0137	32°19.5'	118°30.0'	870	290°	3	partly cloudy	rough	16.33	33.67
93.55-O	18	1914	31°53.0'	119°19.0'	560	290°	1	partly cloudy	rough	16.24	33.53

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

STRANGER; January 17, 1959; 1930 GCT; 27°12'N, 114°40'W; sounding, 340 fm; wind, 310°, force 1; weather, partly cloudy; sea, slight; wire angle, 14°.[a] 2

0	19.5	34.23	-	-	362	0	19.5	34.23		24.31	362	0.00
10	19.48	34.21	4.55	0.49	362	10	19.48	34.21	4.55	24.31	362	0.04
20	19.46	34.23	4.37	0.47	360	20	19.46	34.23	4.37	24.33	360	0.07
30	19.32	34.22	4.19	0.50	357	30	19.32	34.22	4.19	24.37	357	0.11
39	17.61	33.96	4.12	0.68b)	336	50	16.63	33.92	3.85	24.80	316	0.18
55	16.18	33.91	3.71	1.1	309	75	14.19	33.90	3.26	25.32	266	0.25
70	14.42	33.83	3.54	1.3	276	100	13.92	34.14	2.48	25.56	243	0.31
84	13.91	33.99	2.89	1.9	254							
108	13.70	34.16	2.25	2.2	238							

STRANGER; January 18, 1959; 2002 GCT; 25°05'N, 112°55'W; sounding, 650 fm; wind, 260°, force 2; weather, partly cloudy; sea, moderate; wire angle, 12°. 4

0	22.0	34.33	-	-	418	0	22.0	34.33		23.73	418	0.00
30	21.06	34.36	4.85	0.36c)	392	10	21.43	34.35		23.90	401	0.04
64	19.04	34.22	4.37	0.78	350	20	21.19	34.36		23.98	394	0.08
73	19.52	34.00	4.12	0.93	330	30	21.06	34.36	4.85	24.00	392	0.12
98	14.93	34.05	2.59	1.7	271	50	20.65	34.33	4.73	24.10	382	0.20
124	13.30	34.14	1.91	2.3	232	75	17.38	34.00	4.04	24.68	327	0.29
138	12.71	34.28	1.29	2.6	210	100	14.88	34.05	2.58	25.28	270	0.36
162	12.58	34.31	0.72	2.8	205	150	12.65	34.30	1.00	25.94	207	0.48
192	11.35	34.36	0.86	2.8	180	200	11.20	34.40	0.75	26.30	173	0.58
226	10.74	34.51	0.42	3.1 c)	158	250	10.43	34.51	0.38	26.52	153	0.66
304	9.74	34.50	0.29	3.2	142	300	9.80	34.50	0.29	26.62	143	0.74
354	9.08	34.47	0.28	3.2	135	400	8.69	34.46	0.25	26.76	129	0.88
452	8.26	34.45	0.17	3.2 c)	124							

STRANGER; January 19, 1959; 1745 GCT; 23°13.5'N, 110°41'W; sounding, 470 fm; wind, direction missing, force 1; weather, partly cloudy; sea, slight; wire angle, 06°. 6

0	23.2	34.78d)	-	-	418	0	23.2	34.78		23.73	418	0.00
16	23.00	34.87e)	5.04	0.50		10	23.00	34.76		23.77	414	0.04
50	18.82	34.33	3.61	1.2	337	20	23.00	34.76	5.03	23.77	414	0.08
60	17.60	34.30	3.19	1.4	310	30	22.80	34.74	4.98	23.81	410	0.12
70	16.40	34.32	2.30	1.8	282	50	18.82	34.33	3.61	24.58	337	0.20
91	14.84	34.32	1.38	2.3	250	75	16.05	34.32	2.08	25.24	274	0.28
111	13.75	34.42	0.98	2.5	220	100	14.29	34.37	1.18	25.66	234	0.34
167	13.20	34.70	0.35	3.0	188	150	13.39	34.63	0.53	26.05	197	0.45
196	11.98	34.70	0.20	3.0	165	200	11.92	34.70	0.20	26.40	164	0.54
230	11.61f)	34.69	0.19	2.3 g)	160	250	11.31	34.68	0.17	26.49	155	0.62
309	10.34	34.64	0.08	3.1	142	300	10.47	34.65	0.08	26.62	143	0.70
357	10.02	34.60	0.11	3.1	140	400	9.41	34.59	0.12	26.75	130	0.84
455	8.60	34.58	0.13	3.3	119	500	7.90	34.53	0.12	26.95	112	0.97
544	7.21	34.49	0.12	3.5	106	600	6.80	34.47	0.11	27.05	102	1.08
651	6.43	34.46	0.11	3.5	98	700	6.21	34.48	0.11	27.13	94	1.19
789	5.81	34.51	0.12	3.6	87	800	(5.75)	(34.51)	(0.12)	(27.22)	(86)	(1.28)

a) The hydrographic, biological and optical data collected by Tuna Oceanography Research (STOR) of Scripps Institution on Cruise TO-59-1 have been published in U. S. Fish and Wildlife Service Special Scientific Report--Fisheries No. 420.
b) Duplicate value, 0.74 µg at/L.
c) Duplicate values: 30 m, 0.54; 226, 3.0; 452, 3.3 µg at/L.
d) Loose bottle cap; value falls on property curve.
e) Loose bottle cap; value does not fall on property curve.
f) Mean value of 11.55 and 11.66°C.
g) Duplicate value, 3.0 µg at/L.

SIO

TO-59-1

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
8	STRANGER; January 20, 1959; 1747 GCT; 21°17'N, 108°16'W; sounding, 1749 fm; wind, 250°, force 1; weather, cloudy; sea, slight; wire angle, 02°.											
0	24.4	34.78	-	-	451	0	24.4	34.78		23.38	451	0.00
26	24.22	34.76	3.20	0.51	448	10	24.32	34.77		23.39	450	0.04
76	22.03	34.80	3.64	0.92	384	20	24.26	34.76		23.41	448	0.09
81	19.50	34.40	2.86	1.2	349	30	24.18	34.76	3.21	23.43	446	0.13
86	19.40	34.61a)	1.93	1.8	331	50	23.12	34.78	3.43	23.75	416	0.22
101	18.04	34.78	1.27	2.3	286	75	23.05	34.79	3.46	23.78	413	0.32
125	15.46	34.70	0.68	2.7	234	100	18.18	34.77	1.32	25.07	290	0.42
165	13.32	34.79	0.13	2.9	184	150	14.10	34.75	0.32	26.00	202	0.54
194	12.49	34.96u	0.05	3.1		200	12.32	34.81	0.06	26.40	164	0.63
229	11.86	34.81	0.06	3.1	155	250	11.56	34.80	0.08	26.54	151	0.71
308	10.65	34.76	0.11	3.1	138	300	10.79	34.77	0.11	26.66	139	0.79
358	9.80	34.64	0.11	3.2	133	400	9.18	34.58	0.15	26.79	127	0.92
457	8.32	34.52	0.19	3.3	119	500	7.78	34.50	0.21	26.95	112	1.05
546	7.22	34.50	0.21	3.5	105	600	6.75	34.51	0.21	27.09	98	1.16
654	6.30	34.52	0.22	3.6	92	700	5.97	34.53	0.24	27.21	87	1.26
791	5.38	34.54	0.30	3.4	79	800	5.32	34.54	0.30	27.29	79	1.35
925	4.72	34.52	0.33	3.7	73	1000	4.40	34.52		27.39	70	1.52
1038	4.24	34.52	-	3.9	68							
1089	4.11	34.54	-	3.6	66							
10	STRANGER; January 21, 1959; 1757 GCT; 19°33.5'N, 106°03'W; sounding, 2000 fm; wind, 360°, force 3; weather, cloudy; sea, slight; wire angle, 15°.											
0	25.4	34.23	-	-	520	0	25.4	34.23		22.66	520	0.00
15	25.29	34.22	4.66	0.47	517	10	25.35	34.23		22.68	518	0.05
25	24.65	34.30	3.86	0.70	494	20	25.05	34.25	4.33	22.78	508	0.10
39	20.08	34.56	1.67	1.8	352	30	23.20	34.39	3.11	23.43	446	0.15
58	16.86	34.61	0.48	2.5	271	50	18.20	34.59	0.97	24.93	304	0.22
78	15.90	34.72	0.00	2.7 b)	242	75	16.06	34.70	0.08	25.52	247	0.29
122	13.68	34.79	0.00	2.9 b)	191	100	14.77	34.76	0.00	25.86	215	0.35
161	12.76	34.79	0.00	2.9	173	150	13.00	34.79	0.00	26.25	178	0.45
189	12.22	34.81	0.00	2.9	162	200	12.11	34.81	0.02	26.44	160	0.54
223	11.84	34.79	0.07	2.9 b)	157	250	11.52	34.77	0.10	26.52	152	0.62
300	10.92	34.73	0.11	3.1 b)	145	300	10.92	34.73	0.11	26.60	145	0.69
349	10.40	34.71	0.13	3.1 b)	137	400	9.68	34.67	0.13	26.77	129	0.84
446	9.00	34.63	0.13	3.3 b)	121	500	8.16	34.57	0.12	26.94	113	0.96
534	7.63	34.54	0.11	3.5 b)	108	600	7.01	34.52	0.13	27.06	101	1.08
642	6.64	34.52	0.14	3.7	96	700	6.25	34.53	0.14	27.17	91	1.18
779	5.77	34.53	0.13	3.8 b)	84	800	5.68	34.53	0.15	27.25	83	1.28
913	5.12	34.52	0.22	3.9	78	1000	4.74	34.53	0.23	27.36	73	1.44
1027	4.64	34.54	0.23	3.7	71							
1080	4.39	34.56	0.25	3.8 b)	67							

a) Loose bottle cap; value falls on property curve.

b) Duplicate values: 78 m, 2.6; 122, 2.8; 223, 3.0; 300, 3.0; 349, 3.2; 446, 3.5; 534, 3.6; 779, 3.7; 1080, 3.9 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

12

STRANGER; January 22, 1959; 1800 GCT; 18°10'N, 103°26'W; sounding, 850 fm; wind, 090°, force 3; weather, partly cloudy; sea, moderate; wire angle, 02°.

0	27.4	33.76	-	-	613	0	27.4	33.76		21.68	613	0.00
11	27.30	33.75	4.03	0.41	611	10	27.32	33.76		21.70	611	0.06
36	25.70	33.98	3.73	0.61	547	20	27.27	33.76	3.94	21.74	608	0.12
46	22.88	34.33	1.65	1.5	442	30	26.80	33.81	3.85	21.90	592	0.18
55	19.78	34.54	0.48	2.2	345	50	21.60	34.42	1.16	23.91	401	0.28
71	16.88	34.72	0.10	2.6	264	75	16.31	34.74	0.08	25.49	250	0.36
100	14.89	34.78	0.00	2.7	217	100	14.89	34.78	0.00	25.84	217	0.42
155	13.78	34.83	0.00	2.8	190	150	13.88	34.83	0.00	26.10	192	0.53
180	13.38	34.81	0.00	2.8	184	200	12.95	34.83	0.00	26.29	174	0.62
214	12.64	34.84	0.00	2.7	168	250	11.97	34.81	0.03	26.47	157	0.71
273	11.56	34.79	0.06	2.9	151	300	11.24	34.77	0.06	26.57	148	0.79
337	10.82	34.73	0.06	3.0	143	400	9.82	34.66	0.08	26.74	132	0.93
426	9.40	34.63	0.08	3.2	127	500	8.26	34.58	0.10	26.93	114	1.06
505	8.18	34.58	0.10	3.4	113	600	7.28	34.54	0.13	27.04	103	1.17
608	7.20	34.54	0.14	3.6 a)	102	700	6.38	34.54	0.10	27.17	91	1.28
726	6.14	34.54	0.08	3.6	88	800	5.64	34.54	0.10	27.25	83	1.37
859	5.26	34.54	0.15	3.7	78	1000	4.66	34.56	0.22	27.39	70	1.54
964	4.84	34.54	0.21	3.7	74							
1014	4.57	34.57	0.23	3.8	68							

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STRANGER; January 27, 1959; 1743 GCT; 14°40'N, 97°44'W; sounding, 1700 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 09°.

0	26.5	34.01	-	-	568	0	26.5	34.01		22.15	568	0.00
9	26.28	33.96	3.20	0.52	566	10	26.22	33.97	3.18	22.21	563	0.06
17	25.06	34.16	2.95	0.70	516	20	23.57	34.22	3.10	23.20	468	0.11
20	23.57	34.22	3.10	0.86	468	30	23.10	34.28	3.31	23.38	451	0.15
25	23.24	34.25	3.39	0.97	460	50	22.58	34.31	3.15	23.55	435	0.24
50	22.58	34.31	3.15	1.5 b)	435	75	21.28	34.39	3.07	23.98	394	0.35
100	19.97	34.47	2.97	1.7	356	100	19.97	34.47	2.97	24.38	356	0.44
154	16.74	34.66	1.52	1.7 b)	265	150	16.98	34.65	1.62	25.27	271	0.60
179	15.16	34.76	-	2.4	223	200	13.56	34.81	0.59	26.16	187	0.72
212	12.76	34.83	0.38	2.7	170	250	12.29	34.80	0.21	26.41	163	0.81
270	12.03	34.79	0.13	2.8	160	300	11.54	34.79	0.05	26.53	151	0.89
334	10.97	34.78	0.00	3.0	142	400	10.07	34.72	0.00	26.75	131	1.04
421	9.77	34.70	0.00	3.4 b)	128	500	8.35	34.63	0.04	26.95	111	1.17
498	8.38	34.63	0.04	3.6 b)	112	600	7.22	34.60	0.05	27.09	98	1.28
600	7.22	34.60	0.05	3.6 b)	98	700	6.36	34.58	0.05	27.20	88	1.38
718	6.22	34.58	0.05	3.8 b)	86	800	5.71	34.56	0.10	27.27	81	1.47
852	5.41	34.56	0.14	3.7 b)	78	1000	4.59	34.54	0.18	27.38	70	1.64
956	4.84	34.56	0.15	3.7	72							
1006	4.56	34.54	0.19	4.1 b)	70							

a) Duplicate value, 3.8 µg at/L.
b) Duplicate values: 50 m, 1.2; 154, 2.2; 421, 3.2; 498, 3.4; 600, 3.7; 718, 3.7; 852, 3.8; 1006, 3.6 µg at/L.

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OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
15	STRANGER; January 28, 1959; 0536 GCT; 13°39'N, 97°05.5'W; sounding, 2000 fm; wind, 120°, force 2; weather, missing; sea, slight; wire angle, 15°.											
0	26.2	33.93	-	-	565	0	26.2	33.93		22.19	565	0.00
10	24.99	33.96	5.51	0.43	528	10	24.99	33.96	5.51	22.58	528	0.05
25	22.28	34.11	4.83	1.0	441	20	23.10	34.07	5.03	23.22	466	0.10
68	20.39	34.30	3.46	1.6	378	30	22.05	34.14	4.63	23.57	433	0.15
78	18.80	34.40	2.76	1.9	332	50	21.22	34.22	4.06	23.86	405	0.23
88	15.65	34.69	0.76	2.6	239	75	19.50	34.35	3.07	24.42	352	0.33
117	13.68	34.83	0.16	2.9	188	100	14.76	34.76	0.47	25.86	215	0.40
162	12.68	34.81	0.20	2.6 a)	171	150	12.94	34.81	0.20	26.28	175	0.50
189	12.14	34.80	0.15	3.0	161	200	11.94	34.81	0.12	26.47	157	0.58
223	11.51	34.81	0.07	3.1	149	250	11.17	34.78	0.08	26.60	145	0.66
297	10.55	34.74	0.08	3.3	138	300	10.50	34.73	0.08	26.68	137	0.73
343	9.48	34.65	0.06	3.5	127	400	8.78	34.64	0.08	26.89	117	0.86
433	8.38	34.64	0.08	3.7	111	500	7.43	34.60	0.06	27.06	101	0.98
514	7.25	34.59	0.06	3.8	99	600	6.55	34.56	0.07	27.16	92	1.08
612	6.46	34.56	0.07	4.0	91	700	5.98	34.54	0.06	27.22	86	1.18
740	5.76	34.54	0.05	4.0	84	800	5.41	34.55	0.07	27.29	79	1.27
867	5.04	34.56	0.14	4.1	75	1000	4.42	(34.54)	0.29	(27.40)	(69)	(1.43)
978	4.50	34.54	0.25	4.1	70							
1027	4.34	-	0.32	4.1								
16	STRANGER; January 28, 1959; 1200 GCT; 14°08'N, 97°14'W; sounding, 1950 fm; wind, calm; weather, clear; sea, calm; wire angle, 08°.											
0	28.0	33.62	-	-	642	0	28.0	33.62		21.38	642	0.00
11	26.26	34.03	4.91	0.50	560	10	26.35	34.02		22.22	562	0.06
25	23.58	34.22	4.42	0.88	468	20	24.05	34.19	4.51	23.04	484	0.11
70	20.08	34.47	3.21	1.7	358	30	23.21	34.24	4.30	23.32	457	0.16
80	19.44	34.51	3.05	1.8	340	50	21.68	34.36	3.74	23.84	407	0.24
89	18.74	34.53	2.79	1.9	320	75	19.78	34.49	3.13	24.45	349	0.34
130	16.48	34.70	1.61	2.5 b)	257	100	17.98	34.59	2.39	24.98	298	0.42
163	13.05	34.87	0.44	2.6	174	150	14.38	34.81	0.84	25.99	203	0.56
192	12.50	34.83	0.43	2.7	166	200	12.40	34.83	0.38	26.40	164	0.65
225	12.16	34.83	0.22	2.7	159	250	11.90	34.81	0.17	26.49	155	0.73
303	11.31	34.78	0.13	2.9	148	300	11.36	34.78	0.13	26.56	149	0.81
350	10.50	34.76	0.08	3.1	136	400	9.67	34.72	0.12	26.81	125	0.96
442	8.99	34.68	0.08	3.3	117	500	8.17	34.64	0.11	26.98	108	1.08
532	7.76	34.61	0.13	3.5	104	600	7.07	34.58	0.10	27.10	97	1.19
638	6.72	34.57	0.08	3.6	93	700	6.27	34.57	0.10	27.21	87	1.29
774	5.74	34.56	0.13	3.7	82	800	5.60	34.55	0.17	27.27	81	1.38
909	5.01	34.52	0.25	3.7 b)	77	1000	4.54	34.56	0.34	27.40	69	1.55
1021	4.42	34.57	0.38	3.7	67							
1070	4.19	34.56	0.68	3.8	65							

a) Duplicate value, 2.9 µg at/L.
b) Duplicate values: 130 m, 2.2; 909, 3.8 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

STRANGER; January 28, 1959; 2033 GCT; 15°00'N, 97°02'W; sounding, 2000 fm; wind, direction missing, force 1; weather, partly cloudy; sea, slight; wire angle, 07°. 17

0	29.0	33.84	-	-	658	0	29.0	33.84		21.22	658	0.00
6	26.88	33.85	5.17	0.44	591	10	25.30	34.06	4.42	22.57	528	0.06
16	23.20	34.30	3.21	1.3	452	20	21.76	34.36	3.45	23.81	410	0.10
20	21.76	34.36	-	1.4	410	30	21.21	34.39	3.56	24.00	392	0.14
35	20.91	34.41	3.60	1.6	383	50	19.60	34.50	3.00	24.51	343	0.22
75	17.30	34.64	1.98	2.3	279	75	17.30	34.64	1.98	25.18	279	0.30
100	14.24	34.83	0.53	2.7	200	100	14.24	34.83	0.53	26.02	200	0.36
164	12.73	34.81	0.38	2.8	171	150	13.03	34.82	0.39	26.26	177	0.45
194	12.33	34.79	0.68	2.7	166	200	12.30	34.81	0.55	26.41	163	0.54
229	12.16	34.82	0.26	2.8 a)	160	250	11.90	34.81	0.22	26.47	157	0.62
306	11.16	34.76	0.21	3.1 a)	147	300	11.26	34.76	0.21	26.56	148	0.70
357	10.50	34.74	0.13	3.2	137	400	9.76	34.69	0.10	26.78	128	0.84
456	8.77	34.64	0.10	3.6	117	500	8.19	34.61	0.11	26.96	110	0.97
546	7.63	34.59	0.11	3.8	104	600	7.11	34.57	0.08	27.09	98	1.08
655	6.62	34.56	0.06	4.0	93	700	6.35	34.55	0.06	27.18	90	1.18
793	5.82	-	0.07	4.0		800	5.77	34.55	0.08	27.25	83	1.28
928	5.04	34.55	0.18	4.1	75	1000	4.76	34.54	0.20	27.37	72	1.44
1042	4.63	34.54	0.22	4.1	71							
1093	4.52	34.58	0.28	4.2	67							

STRANGER; January 29, 1959; 0315 GCT; 15°45'N, 97°05.5'W; sounding, 475 fm; wind, calm; weather, clear; sea, slight; wire angle, 02°. 18

0	27.9	33.55	-	-	644	0	27.9	33.55		21.37	644	0.00
11	26.60	33.79	5.47	0.36	587	10	26.71	33.76		21.91	591	0.06
15	25.91	33.94	5.25	0.46b)	556	20	25.06	33.98	4.75	22.57	528	0.12
20	25.06	33.98	4.75	0.61	528	30	25.00	33.99	4.70	22.60	525	0.17
35	22.66	34.25	3.42	1.3	442	50	21.10	34.37	3.01	24.01	391	0.26
45	21.61	34.33	3.21	1.4	408	75	19.35	34.56	2.62	24.62	333	0.35
55	20.40	34.42	2.76	1.7	370	100	17.76	34.65	1.94	25.08	289	0.43
65	19.36	34.56	2.62	1.9	334	150	14.02	34.84	0.51	26.08	194	0.55
100	17.76	34.65	1.94	2.1	289	200	13.33	34.84	0.37	26.22	181	0.64
116	15.68	34.78	0.75	2.6	234	250	12.67	34.82	0.23	26.34	169	0.74
140	14.23	34.85	0.56	2.6 b)	198	300	12.12	34.80	0.18	26.43	161	0.82
170	13.65	34.82	0.43	2.7 b)	188	400	11.17	34.75	0.12	26.58	147	0.98
205	13.28	34.84	0.36	2.7	180	500	9.80	34.68	0.04	26.76	129	1.13
273	12.36	34.81	0.19	2.7	165	600	8.35	34.62	0.04	26.95	112	1.26
377	11.46	34.78	0.14	2.9	151	700	6.97	34.58	0.03	27.12	95	1.37
507	9.70	34.68	0.04	3.2	128	800	5.92	34.56	0.12	27.24	84	1.47
661	7.46	34.60	0.03	3.5 b)	102							
766	6.16	34.56	0.06	3.6	87							
816	5.82	34.56	0.13	3.7	83							

STRANGER; January 29, 1959; 1454 GCT; 15°38.5'N, 96°00'W; sounding, 120 fm; wind, 360°, force 2; weather, partly cloudy; sea, moderate; wire angle, 18°. 19

2	27.00	33.64	4.79	0.32	610	0	(27.00)	(33.64)	(4.79)	(21.72)	(610)	(0.00)
11	26.92	33.71	4.66	0.32	602	10	26.94	34.70	4.70	21.80	602	0.06
20	24.30	34.16	3.58	0.99	494	20	24.30	34.16	3.58	22.93	494	0.12
30	22.46	34.42	2.35	1.6	424	30	22.46	34.42	2.35	23.66	424	0.16
39	19.96	34.78	1.57	2.0	332	50	17.16	34.76	0.87	25.31	267	0.23
50	17.16	34.76	0.87	2.3	267	75	15.98	34.78	0.70	25.61	238	0.29
73	16.08	34.78	0.73	2.5	242	100	14.75	34.78	0.45	25.87	214	0.35
96	14.90	34.78	0.49	2.6 c)	217	150	13.50	34.81	0.41	26.17	186	0.45
119	14.24	34.81	0.21	2.8	201	200	(13.00)	(34.82)	(0.42)	(26.28)	(175)	(0.54)
155	13.40	34.81	0.42	2.8	184							
194	13.04	34.82	0.42	2.8	176							

a) Duplicate values: 229 m, 2.9; 306, 2.5 µg at/L.
b) Duplicate values: 15 m, 0.39; 140, 2.7; 170, 2.6; 661, 3.6 µg at/L.
c) Duplicate value, 2.4 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
20	STRANGER; January 29, 1959; 1953 GCT; 15°00'N, 96°06.5'W; sounding, 2200 fm; wind, 220°, force 2; weather, partly cloudy; sea, moderate; wire angle, 08°.											
0	28.3	33.73	-	-	645	0	28.3	33.73		21.35	645	0.00
6	25.55	34.06	7.12	0.29	543	10	23.60	34.13	5.69	23.13	475	0.06
11	23.38	34.14	5.51	0.60	469	20	22.34	34.19	4.45	23.53	437	0.10
25	21.92	34.22	4.05	1.2	424	30	21.32	34.28	3.62	23.87	404	0.14
50	20.33	34.39	2.99	1.6	370	50	20.33	34.39	2.99	24.23	370	0.22
85	18.32	34.54	2.10	1.7 a)	310	75	19.25	34.47	2.48	24.58	337	0.31
100	14.34	34.79	0.62	2.5 a)	204	100	14.34	34.79	0.62	25.98	204	0.38
164	12.41	34.85	0.16	2.7	163	150	12.55	34.85	0.17	26.39	165	0.47
194	12.20	34.81	0.17	2.9 a)	161	200	12.15	34.80	0.17	26.43	161	0.55
229	11.92	34.78	0.21	2.8 a)	159	250	11.72	34.77	0.21	26.48	156	0.64
306	11.14	34.76	0.13	2.9	146	300	11.21	34.76	0.14	26.57	147	0.71
355	10.59	34.72	0.11	3.0	140	400	9.80	34.68	0.08	26.76	130	0.86
453	8.92	34.64	0.08	3.4	119	500	8.36	34.63	0.11	26.95	112	0.98
542	7.92	34.62	0.13	3.6 a)	106	600	7.36	34.58	0.15	27.06	101	1.10
650	6.95	34.56	0.15	3.5	97	700	6.58	34.56	0.17	27.16	92	1.20
788	5.98	34.57	0.17	3.6	84	800	5.92	34.57	0.18	27.25	83	1.30
920	5.26	34.53	0.17	3.7	77	1000	4.83	34.56	0.21	27.37	72	1.97
1035	4.67	34.56	0.23	3.8	70							
1086	4.48	34.56	0.35	3.8	68							
21	STRANGER; January 30, 1959; 0209 GCT; 14°19.5'N, 96°03'W; sounding, 1800 fm; wind, calm; weather, clear; sea, moderate; wire angle, 06°.											
0	26.0	34.14	-	-	544	0	26.0	34.14		22.41	544	0.00
6	25.64	34.21	6.34	0.38b)	528	10	24.55	34.14	6.02	22.84	502	0.05
13	23.91	34.09	5.75	0.66	487	20	22.97	34.07	4.26	23.26	462	0.10
20	22.97	34.07	4.26	1.0	462	30	22.80	34.08	4.08	23.32	457	0.15
50	20.24	34.36	2.84	1.7	370	50	20.24	34.36	2.84	24.23	370	0.23
60	17.85	34.56	2.00	2.1 b)	298	75	14.20	34.88	0.22	26.08	194	0.30
70	14.44	34.88	0.29	2.8	200	100	13.26	34.88	0.15	26.23	180	0.35
166	12.19	34.98r	0.07	3.0		150	12.43	34.85	0.07	26.40	164	0.44
195	11.80	34.79	0.14	3.0	156	200	11.75	34.78	0.14	26.49	155	0.52
230	11.44	34.76	0.12	3.0	152	250	11.24	34.76	0.12	26.57	148	0.59
310	10.62	34.78	0.12	3.1	136	300	10.74	34.78	0.12	26.67	138	0.67
359	9.86	34.70	0.11	3.3	130	400	9.21	34.67	0.10	26.84	122	0.80
459	8.34	34.64	0.08	3.4	110	500	8.87	34.61	0.07	27.01	106	0.92
548	7.42	34.60	0.07	3.7 b)	101	600	7.06	34.59	0.09	27.11	96	1.03
658	6.68	34.58	0.11	-	92	700	6.41	34.58	0.11	27.19	89	1.13
796	5.76	34.56	0.11	-	82	800	5.73	34.56	0.11	27.26	82	1.22
930	5.06	34.55	0.19	-	76	1000	4.72	34.55	0.19	27.38	71	1.39
1045	4.51	34.56	0.19	-	68							
1094	4.27	34.56	0.42	-	66							

a) Duplicate values: 85 m, 1.9; 100, 2.6; 194, 2.8; 229, 2.9; 542, 3.5 µg at/L.
b) Duplicate values: 6 m, 0.26; 60, 2.2; 548, 3.6 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

22

STRANGER; January 30, 1959; 0950 GCT; 13°47'N, 95°51'W; sounding, 2150 fm; wind, 320°, force 2; weather, clear; sea, moderate; wire angle, 03°.

0	26.5	34.05	-	-	565	0	26.5	34.05		22.19	565	0.00
11	25.96	34.07	5.41	0.26	548	10	26.35	34.06		22.24	560	0.06
26	24.73	34.09	4.05	0.67	510	20	25.10	34.09	4.50	22.64	522	0.11
41	19.98	34.47	1.92	1.6	355	30	24.30	34.11	3.71	22.90	497	0.16
51	15.40	34.78	0.35	2.5	227	50	15.70	34.78	0.43	25.66	234	0.23
56	14.87	34.78	0.25	2.5	216	75	13.83	34.79	0.34	26.08	194	0.29
66	14.12	34.79	0.36	2.6	200	100	13.23	34.80	0.24	26.22	181	0.34
166	12.14	34.81	0.13	2.7	160	150	12.38	34.81	0.12	26.39	165	0.42
196	11.81	34.80	0.17	2.8 a)	156	200	11.78	34.80	0.17	26.49	155	0.50
230	11.42	34.79	0.14	2.9	149	250	11.12	34.77	0.14	26.59	146	0.58
310	10.16	34.69	0.12	3.0 a)	135	300	10.33	34.70	0.13	26.68	137	0.66
359	9.34	34.65	0.15	3.2	123	400	8.69	34.65	0.14	26.92	115	0.78
457	7.86	34.60	0.13	3.5	107	500	7.51	34.58	0.15	27.04	103	0.90
549	7.10	34.57	0.15	3.5	98	600	6.81	34.57	0.15	27.13	94	1.00
657	6.41	34.58	0.12	3.6	89	700	6.13	34.57	0.11	27.22	86	1.10
797	5.63	34.56	0.10	3.6	81	800	5.61	34.56	0.10	27.28	80	1.19
932	4.94	34.56	0.17	3.7 a)	73	1000	4.63	34.56	0.32	27.39	70	1.36
1046	4.44	34.57	0.42	3.7	67							
1096	4.26	34.59	0.47	3.8	64							

23

STRANGER; January 30, 1959; 2057 GCT; 13°49'N, 94°57'W; sounding, 1850 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 21°.

0	27.2	33.93	-	-	596	0	27.2	33.93		21.86	596	0.00
5	27.22	33.93	4.96	0.38b)	596	10	27.20	33.93	4.95	21.87	595	0.06
24	25.34	33.98	4.25	0.78	536	20	25.90	33.96	4.44	22.30	554	0.12
29	21.64	34.36	2.35	1.5	406	30	19.50	34.52	0.88	24.55	340	0.16
33	17.59	34.63	0.12	2.3	286	50	15.06	34.80	0.11	25.82	219	0.22
48	15.18	34.79	0.11	2.7	222	75	13.70	34.85	0.20	26.16	187	0.27
80	13.47	34.85	0.21	2.7	183	100	13.07	34.85	0.24	26.29	174	0.31
168	11.99	34.83	0.42	2.9 b)	156	150	12.29	34.84	0.34	26.44	160	0.40
200	11.72	34.80	0.55	2.7	154	200	11.72	34.80	0.55	26.50	154	0.48
228	11.44	34.79	0.12	2.7	150	250	11.25	34.77	0.11	26.58	147	0.56
303	10.81	34.74	0.10	3.0 b)	142	300	10.83	34.74	0.10	26.62	143	0.63
360	10.03	34.70	0.12	3.1 b)	132	400	9.48	34.67	0.10	26.80	125	0.77
478	8.42	34.63	0.07	3.4	113	500	8.16	34.62	0.08	26.98	109	0.89
563	7.42	34.60	0.06	3.6	101	600	7.04	34.59	0.10	27.11	96	1.00
665	6.55	34.58	0.14	3.7 b)	90	700	6.31	34.58	0.16	27.20	88	1.10
816	5.68	34.57	0.17	3.8 b)	81	800	5.76	34.57	0.17	27.27	81	1.19
954	5.01	34.58	0.19	3.7 b)	72	1000	4.79	34.58	0.28	27.39	70	1.36
1079	4.46	34.58	0.38	3.7 b)	66							
1128	4.24	34.58	0.41	3.9 b)	64							

a) Duplicate values: 196 m, 2.9; 310, 3.2; 932, 4.0 µg at/L.
b) Duplicate values: 5 m, 0.31; 168, 2.8; 303, 2.9; 360, 3.0; 665, 3.8; 816, 3.7; 954, 3.8; 1079, 3.8; 1128, 3.8 µg at/L.

SIO

TO-59-1

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

24 STRANGER; January 31, 1959; 0322 GCT; 14°14'N, 95°05.5'W; sounding, 2150 fm; wind, 040°, force 4; weather, clear; sea, rough; wire angle, 31°.

0	26.7	33.87	-	-	584	0	26.7	33.87		21.99	584	0.00
9	26.49	33.84	4.91	0.41	580	10	26.48	33.84	4.90	22.03	580	0.06
23	25.58	33.84	3.99	0.69	553	20	26.46	33.84	4.85	22.04	579	0.12
27	19.60	34.47	1.30	1.9	346	30	17.90	34.58	0.73	25.00	297	0.16
31	17.47a)	34.61	0.60	2.3	285	50	15.10	34.79	0.12	25.81	220	0.21
35	16.26	34.76	0.28	2.6	247	75	14.03	34.82	0.21	26.06	196	0.26
49	15.15	34.79	0.12	2.6	221	100	13.32	34.83	0.28	26.22	181	0.31
158	12.27	34.83	0.33	2.7	161	150	12.37	34.83	0.33	26.41	163	0.40
189	11.99	34.83	0.22	2.8 b)	156	200	11.90	34.81	0.17	26.48	156	0.48
215	11.76	34.79	0.12	3.0 b)	155	250	11.46	34.78	0.17	26.53	151	0.56
287	11.17	34.78	0.17	2.8 b)	145	300	11.03	34.77	0.17	26.61	144	0.63
340	10.54	34.74	0.15	3.0	137	400	9.75	34.69	0.10	26.78	128	0.78
450	9.06	34.66	0.06	3.4	120	500	8.34	34.65	0.10	26.97	110	0.90
530	7.94	34.65	0.13	3.6 b)	104	600	7.27	34.62	0.09	27.10	96	1.01
634	7.02	34.61	0.08	3.6	94	700	6.47	34.58	0.12	27.18	90	1.11
769	5.98	34.56	0.16	3.7	85	800	5.82	34.57	0.19	27.26	82	1.20
901	5.32	34.59	0.23	3.7	75	1000	4.82	34.57	0.29	27.38	71	1.37
1022	4.72	34.57	0.30	3.8	70							
1070	4.53	34.60	0.28	3.8	66							

25 STRANGER; February 6, 1959; 0210 GCT; 15°06'N, 95°01'W; sounding, 1900 fm; wind, calm; weather, clear; sea, slight; wire angle, 05°.

0	25.3	34.18	-	-	528	0	25.3	34.18		22.58	528	0.00
16	24.67	34.12	3.28	0.73c)	507	10	24.69	34.12		22.78	508	0.05
20	24.62	34.13	3.07	0.79	504	20	24.62	34.13	3.07	22.82	504	0.10
30	19.28	34.56	0.76	2.0 c)	332	30	19.28	34.56	0.76	24.63	332	0.14
40	15.92	-	0.00	2.6 c)		50	15.36	34.73	0.00	25.70	230	0.20
55	15.06	34.78	0.00	2.5	221	75	14.15	34.81	0.00	26.03	199	0.25
121	13.07	34.83	0.08	2.6	176	100	13.48	34.83	0.01	26.18	184	0.30
156	12.50	34.81	0.51	2.5	167	150	12.59	34.81	0.47	26.35	168	0.39
181	12.35	34.84	0.32	2.6 c)	162	200	12.09	34.81	0.38	26.44	160	0.48
215	11.90	34.79	0.46	2.6 c)	158	250	11.71	34.78	0.23	26.50	154	0.56
275	11.56	34.78	0.14	2.8	152	300	11.34	34.77	0.13	26.56	149	0.63
339	10.90	34.75	0.13	3.0	143	400	10.03	34.70	0.12	26.72	133	0.78
428	9.63	34.67	0.11	3.2	128	500	8.54	34.62	0.07	26.91	115	0.91
507	8.46	34.62	0.07	3.4	114	600	7.44	34.60	0.14	27.06	101	1.02
611	7.36	34.60	0.14	3.6 c)	100	700	6.76	34.58	0.15	27.14	93	1.13
730	6.59	34.58	0.15	3.6	91	800	6.14	34.58	0.11	27.22	86	1.22
863	5.74	34.58	0.08	3.7	80	1000	4.80	34.55	0.21	27.37	72	1.40
968	4.96	34.56	0.23	3.9 c)	73							
1019	4.72	34.55	0.19	3.8	71							

a) Alternate value, 17.78°C, not used in interpolation.
b) Duplicate values: 189 m, 2.9; 215, 2.9; 287, 2.9; 530, 3.5 µg at/L.
c) Duplicate values: 16 m, 0.82; 30, 2.1; 40, 2.5; 181, 2.7; 215, 2.7; 611, 3.5; 968, 3.8 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

27

STRANGER; February 7, 1959; 1634 GCT; 14°01'N, 92°23'W; sounding, 115 fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 06°.

1	27.98	33.69	4.58	0.34	636	0	(27.98)	(33.69)	(4.58)	(21.45)	(636)	(0.00)
11	27.53	33.68	4.54	0.31	623	10	27.55	33.68	4.54	21.57	624	0.06
25	26.97	33.66	4.45	0.33	608	20	27.13	33.66	4.48	21.70	612	0.12
50	26.33	33.78	3.85	0.55	580	30	26.92	33.66	4.42	21.78	604	0.18
61	24.76	33.95	3.40	0.99	522	50	26.33	33.78	3.85	22.03	580	0.30
71	21.16	34.43	1.78	1.8	388	75	20.52	34.52	1.54	24.28	365	0.42
76	20.37	34.54	1.48	1.9	360	100	15.62	34.78	0.71	25.68	232	0.50
81	18.10	34.72	1.06	2.2	292	150	13.27	34.83	0.46	26.23	180	0.60
91	16.98	34.74	0.80	2.2	264	200	12.82	34.85	0.40	26.33	170	0.69
100	15.62	34.78	0.71	2.4	232							
120	14.12	34.83	0.68	2.5	197							
160	13.12	34.83	0.41	2.6	177							
200	12.82	34.85	0.40	2.6	170							

29

STRANGER; February 8, 1959; 1717 GCT; 11°40'N, 90°53'W; sounding, 1950 fm; wind, 090°, force 5; weather, clear; sea, high; wire angle, 05°.

2	26.44	33.78	4.76	0.48	583	0	(26.44)	(33.78)	(4.76)	(22.00)	(583)	(0.00)
12	26.46	33.86	4.73	0.48	578	10	26.45	33.85	4.74	22.04	579	0.06
37	24.84	33.98	4.47	0.75	522	20	26.45	33.86	4.72	22.06	577	0.12
47	22.10	34.24	4.45	1.3	427	30	26.06	33.90	4.66	22.20	564	0.17
61	17.40	34.75	1.06	2.7 a)	273	50	20.80	34.39	3.77	24.10	382	0.27
72	16.70	34.79	0.64	2.2 a)	254	75	16.52	34.80	0.73	25.49	250	0.35
82	15.97	34.80	0.95	2.2	238	100	14.60	34.82	0.61	25.94	207	0.41
102	14.54	34.83	0.59	2.4	205	150	13.11	34.85	0.60	26.28	175	0.50
122	14.21	34.88	0.68	2.4	195	200	12.40	34.87	0.41	26.43	161	0.59
136	13.58	34.87	0.57	2.4 a)	183	250	11.69	34.76	0.33	26.49	155	0.67
160	12.90	34.85	0.61	2.4	172	300	11.14	34.76	0.26	26.58	146	0.75
199	12.42	34.87	0.42	2.6	161	400	9.69	34.69	0.23	26.78	128	0.89
238	11.83	34.78	0.38	2.6	157	500	8.27	34.63	0.13	26.96	110	1.02
298	11.18	34.76	0.28	2.7 a)	147	600	7.12	34.59	0.13	27.10	97	1.12
388	9.89	34.70	0.23	3.0	130							
503	8.22	34.63	0.13	3.3	110							
652	6.64	34.58	0.13	3.5	92							

30

STRANGER; February 10, 1959; 1650 GCT; 8°10'N, 88°06.5'W; sounding, 1850 fm; wind, 030°, force 4; weather, clear; sea, very rough; wire angle, 08°.

0	28.1	33.26	-	-	671	0	28.1	33.26		21.08	671	0.00
11	27.76	33.80	4.39	0.37	622	10	27.81	33.73		21.53	628	0.06
21	25.23	34.42	4.35	0.56	501	20	25.30	34.41	4.36	22.82	504	0.12
25	23.93	34.45	3.90	0.67	462	30	23.20	34.51	3.66	23.52	438	0.17
40	21.20	34.65	3.07	1.2	374	50	19.00	34.68	2.42	24.80	316	0.24
60	17.48	34.70	2.00	1.7	279	75	16.00	34.76	1.68	25.58	241	0.31
80	15.56	34.78	1.57	1.9	230	100	14.50	34.84	1.22	25.97	204	0.37
163	13.07	34.91	0.78	2.3	171	150	13.30	34.90	0.84	26.28	175	0.47
192	12.72	34.88	0.72	2.4	166	200	12.67	34.88	0.70	26.39	165	0.55
226	12.42	34.89	0.56	2.6	160	250	12.28	34.89	0.53	26.47	157	0.64
304	11.70	34.83	0.42	2.7	151	300	11.74	34.83	0.44	26.53	151	0.72
354	11.14	34.78	0.40	2.8	145	400	10.29	34.73	0.24	26.71	134	0.86
450	9.24	34.68	0.11	3.3	122	500	8.32	34.64	0.08	26.96	110	0.99
540	7.66	34.63	0.06	3.5	102	600	7.11	34.61	0.09	27.11	96	1.10
648	6.73	34.60	0.13	3.6	91	700	6.32	34.59		27.21	87	1.20
921	5.00	34.58	0.59u	3.4	72	800	5.66	34.58		27.28	80	1.29
1036	4.57	34.60	0.89u	3.5	66	1000	4.69	34.59		27.41	68	1.45
1086	4.37	34.58	0.64u	3.7	65							

a) Duplicate values: 61 m, 2.2; 72, 2.3; 136, 2.5; 298, 2.8 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
31	STRANGER; February 11, 1959; 0012 GCT; 8°36.5'N, 88°16'W; sounding, 1810 fm; wind, 020°, force 4; weather, partly cloudy; sea, very rough; wire angle, 13°.											
0	28.4	32.48	-	-	737	0	28.4	32.48	(4.65)	20.40	737	0.00
1	28.29	32.47	4.65	0.30	734	10	28.07	32.73	4.59	20.69	708	0.07
6	28.28	32.44	4.59	0.32	736	20	26.30	34.12	4.66	22.30	554	0.14
15	27.26	33.92	4.68	0.39	598	30	22.30	34.60	3.83	23.86	406	0.18
25	24.49	34.41	4.49	0.71	480	50	17.56	34.74	2.69	25.20	278	0.25
44	18.52	34.72	2.68	1.6	302	75	14.35	34.90	1.68	26.05	197	0.31
69	15.01	34.82	2.76	2.1	216	100	13.90	34.93	0.94	26.18	185	0.36
93	13.94	34.93	0.96	2.4	186	150	13.22	34.90	0.90	26.29	174	0.45
117	13.58	34.90	0.85	2.5	181	200	12.67	34.90	0.54	26.40	164	0.54
156	13.15	34.90	0.91	2.5	172	250	12.01	34.88	0.34	26.50	154	0.62
196	12.71	34.90	0.55	2.7	164	300	11.40	34.80	0.28	26.56	148	0.70
246	12.06	34.88	0.38	2.8	154	400	(9.84)	(34.74)	(0.19)	(26.80)	(126)	(0.84)
296	11.45	34.80	0.29	3.0	148							
399	9.86	34.74	0.19	3.3	127							
32	STRANGER; February 12, 1959; 0415 GCT; 8°58'N, 88°22'W; sounding, 1800 fm; wind, 070°, force 4; weather, partly cloudy; sea, very rough; wire angle, 21°.											
0	27.9	32.54	-	-	716	0	27.9	32.54		20.61	716	0.00
10	27.94	32.54	4.31	0.29	718	10	27.94	32.54	4.31	20.60	718	0.07
15	27.92	32.77	4.18	0.29	701	20	27.60	33.09	4.13	21.11	668	0.14
24	23.78	34.34	4.04	0.70	466	30	20.40	34.70	2.88	24.45	349	0.19
29	20.72	34.67	2.90	1.3	360	50	15.82	34.74	1.98	25.60	239	0.25
38	17.64	34.86	2.85	1.7	271	75	14.38	34.74	0.95	25.93	208	0.31
52	15.52	34.72	1.72	1.9	234	100	13.95	34.88	0.86	26.13	190	0.36
75	14.38	34.74	0.95	2.3	208	150	13.23	34.91	0.54	26.30	174	0.45
104	13.90	34.90	0.84	2.3	188	200	11.95	34.84	0.40	26.50	154	0.53
132	13.53	34.93	0.60	2.4	178	250	11.28	34.80	0.25	26.59	146	0.61
159	13.04	34.90	0.51	2.5	171	300	10.75	34.77	0.24	26.66	139	0.68
196	12.02	34.85	0.41	2.6	156	400	9.71	34.70	0.13	26.78	127	0.82
241	11.40	34.81	0.25	2.7	147	500	(8.09)	(34.68)	(0.12)	(27.03)	(104)	(0.94)
288	10.86	34.78	0.24	2.8	140							
388	9.86	34.70	0.14	3.1	130							
496	8.18	34.68	0.12	3.3	105							
35	STRANGER; February 13, 1959; 1725 GCT; 12°06'N, 89°36'W; sounding, 2350 fm; wind, 060°, force 6; weather, clear; sea, rough; wire angle, missing.											
0	25.7	33.56	-	-	576	0	25.7	33.56		22.07	576	0.00
8a)	25.68	33.57	4.34	0.36	575	10	25.66	33.57	4.33	22.08	575	0.06
23	25.64	33.57	4.22	0.42	574	20	25.64	33.57	4.26	22.09	574	0.11
29	25.70	33.58	4.26	0.38	575	30	25.70	33.58	4.26	22.08	575	0.17
36	25.68	33.61	4.23	0.38	573	50	25.38	33.61	4.18	22.19	564	0.29
43	25.62	33.57	4.22	0.42	573	75	23.00	34.23	3.91	23.37	452	0.41
79	22.10	34.43	3.78	1.2	413	100	16.26	34.84	1.18	25.58	242	0.50
118	15.28	34.87	0.82	2.2	218	150	14.14	34.89	0.68	26.09	193	0.61
173	13.58	34.90	0.64	2.4	181							
37	STRANGER; February 14, 1959; 2005 GCT; 14°12'N, 92°35'W; sounding, 150 fm; wind, 330°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.											
0	28.5	33.73	-	-	650	0	28.5	33.73	(4.24)	21.30	650	0.00
1	28.40	33.74	4.24	0.37	646	10	28.08	33.72	4.23	21.43	638	0.06
11	28.06	33.72	4.23	0.36	637	20	27.30	33.77	4.12	21.72	610	0.13
51	24.65	34.03	3.17	1.0	512	30	27.00	33.79	3.94	21.84	599	0.19
61	20.07	34.56	1.14	1.9	351	50	24.85	34.02	3.22	22.67	519	0.30
77	16.86	34.76	0.50	2.3	261	75	17.30	34.75	0.51	25.28	270	0.40
87	15.64	34.78	0.50	2.5	232	100	15.06	34.78	0.31	25.81	220	0.46
102	14.98	34.78	0.30	2.5	218	150	13.52	34.85	0.36	26.20	183	0.56
127	14.06	34.79	0.44	2.6	199	200	12.99	34.85	0.32	26.30	173	0.65
168	13.25	34.87	0.32	2.7	177	250	12.47	34.82	0.29	26.38	166	0.74
208	12.92	34.85	0.32	2.6	172							
258	12.38	34.81	0.27	2.6	165							

a) Wire angle missing; depth somewhat in error.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

STRANGER; February 16, 1959; 1648 GCT; 15°51'N, 97°58.5'W; sounding, 500 fm; wind, 120°, force 4; weather, partly cloudy; sea, slight; wire angle, 26°. 40

0	27.8	33.98	-	-	610	0	27.8	33.98	(4.24)	21.73	610	0.00
1	27.72	33.95	4.24	0.32	609	10	26.75	33.93	4.50	22.01	582	0.06
9	26.82	33.93	4.51	0.35	584	20	25.99	33.94	4.04	22.26	558	0.12
29	25.31	33.96	3.56	0.79	536	30	25.26	33.96	3.52	22.50	535	0.17
46	23.74	34.14	2.70	1.2	478	50	23.25	34.18	2.62	23.26	462	0.27
55	22.38	34.27	2.52	1.4	432	75	18.08	34.60	1.44	24.96	300	0.36
63	19.14	34.55	1.32	2.1	329	100	16.42	34.74	0.63	25.47	252	0.44
76	17.96	34.61	1.41	2.2	296	150	13.86	34.82	0.21	26.10	192	0.55
88	17.22	34.73	0.70	2.2	271	200	12.96	34.83	0.23	26.29	174	0.64
102	16.26	34.74	0.62	2.3	249	250	12.28	34.81	0.20	26.41	163	0.73
121	14.44	34.74	0.47	2.5	210	300	11.59	34.77	0.14	26.51	153	0.81
145	13.98	34.81	0.23	2.8	195	400	10.31	34.71	0.14	26.69	136	0.95
171	13.36	34.83	0.22	2.7	182	500	9.12	34.64	0.17	26.84	122	1.09
227	12.60	34.83	0.22	2.8	168	600	7.92	34.60	0.10	27.00	107	1.21
316	11.36	34.76	0.12	2.9	150	700	6.74	34.57	0.10	27.14	93	1.33
430	9.95	34.69	0.15	3.1	132							
577	8.20	34.61	0.12	3.6	111							
679	6.98	34.59	0.08	3.7	95							
729	6.44	34.55	0.13	3.8	92							

STRANGER; February 17, 1959; 1520 GCT; 16°42.5'N, 100°12'W; sounding, 490 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 08°. 42

0	28.4	33.73	-	-	647	0	28.4	33.73		21.33	647	0.00
11	28.25	33.75	4.19	0.32	640	10	28.26	33.75		21.39	641	0.06
40	25.04	34.15	3.36	0.84	516	20	28.22	33.75	4.18	21.40	640	0.13
50	22.56	34.40	2.21	1.4	428	30	27.20	33.88	3.92	21.83	599	0.19
65	19.69	34.59	1.22	2.0	340	50	22.56	34.40	2.21	23.62	428	0.29
80	17.51	34.65	1.56	2.1	283	75	18.07	34.63	1.50	24.99	298	0.38
100	16.05	34.76	0.70	2.2	243	100	16.05	34.76	0.70	25.57	243	0.45
155	13.12	34.88	0.23	2.4	174	150	13.27	34.88	0.28	26.27	176	0.56
180	12.80	34.87	0.18	2.6	168	200	12.49	34.86	0.12	26.41	163	0.65
216	12.22	34.86	0.10	2.7	158	250	11.85	34.84	0.08	26.51	153	0.73
274	11.62	34.83	0.07	2.7	150	300	11.40	34.81	0.06	26.58	147	0.81
338	11.00	34.77	0.05	2.8	143	400	10.02	34.71	0.10	26.74	132	0.95
428	9.60	34.69	0.11	2.9	126	500	8.78	34.67	0.13	26.92	115	1.08
506	8.70	34.67	0.13	3.1	114	600	7.29	34.60	0.13	27.08	99	1.19
611	7.12	34.59	0.13	3.2	98	700	6.49	34.58	0.16	27.18	90	1.30
729	6.32	34.58	0.18	3.4	88	800	5.93	34.58	0.16	27.25	83	1.39
864	5.54	34.57	0.13	3.6	79	1000	4.63	34.58	0.29	27.41	68	1.56
968	4.74	34.58	0.23	3.6	69							
1018	4.60	34.58	0.30	3.7	68							

STRANGER; February 18, 1959; 1745 GCT; 17°47'N, 103°14'W; sounding, 1400 fm; wind, 280°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°. 44

0	27.2	33.98	-	-	592	0	27.2	33.98		21.91	592	0.00
6	27.18	33.96	4.45	0.39	593	10	27.12	33.96	4.37	21.92	590	0.06
11	27.10	33.96	4.36	0.37	590	20	25.60	34.12	3.70	22.52	533	0.12
31	23.80	34.30	2.94	1.1	469	30	23.82	34.30	2.95	23.19	469	0.16
51	20.06	34.53	1.19	1.9	353	50	20.10	34.53	1.22	24.39	355	0.25
76	15.96	34.78	0.13	2.5	240	75	16.10	34.75	0.16	25.55	244	0.32
111	13.64	34.85	0.22	2.6	186	100	14.06	34.84	0.23	26.07	195	0.38
166	12.81	34.87	0.09	2.7	168	150	12.92	34.87	0.10	26.32	171	0.47
196	12.56	34.84	0.11	2.7	166	200	12.51	34.84	0.12	26.39	165	0.56
231	12.14	34.83	0.13	2.9	159	250	11.92	34.82	0.13	26.48	156	0.64
309	11.37	34.78	0.13	3.0	149	300	11.45	34.78	0.13	26.55	150	0.72
358	10.92	34.76	0.13	3.0	142	400	10.21	34.71	0.11	26.71	134	0.86
457	9.16	34.63	0.10	3.1	124	500	8.41	34.62	0.11	26.94	113	1.00
547	7.76	34.60	0.12	3.2	105	600	7.23	34.58	0.11	27.07	100	1.11
655	6.80	34.56	0.10	3.4	95	700	6.44	34.55	0.11	27.16	92	1.21
794	5.78	34.54	0.17	3.4	84	800	5.73	34.54	0.17	27.24	83	1.31
929	4.96	34.54	0.20	3.6	74	1000	4.59	34.56	0.24	27.40	69	1.47
1043	4.39	34.56	0.27	3.6	67							
1093	4.18	34.55	0.35	3.6	65							

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OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

46 STRANGER; February 20, 1959; 0115 GCT; 19°46.5'N, 105°44'W; sounding, 950 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 00°.

0	24.3	34.49	-	-	470	0	24.3	34.49		23.18	470	0.00
11	23.30	34.47	4.76	0.61	443	10	23.32	34.47		23.46	444	0.04
26	22.83	34.52	3.86	0.84	426	20	23.20	34.48	4.68	23.50	440	0.09
36	19.14	34.56	0.54	2.2	328	30	21.14	34.54	1.79	24.13	380	0.13
51	17.44	34.65	0.26	2.4	282	50	17.50	34.64	0.27	25.14	283	0.20
76	15.51	34.74	0.12	2.7	232	75	15.59	34.74	0.13	25.66	234	0.26
111	13.82	34.81	0.10	2.7	192	100	14.25	34.79	0.10	26.00	202	0.32
166	12.70	34.84	0.08	2.7	169	150	12.94	34.84	0.08	26.30	173	0.41
195	12.26	34.81	0.08	2.7	163	200	12.20	34.81	0.09	26.43	161	0.50
230	11.86	34.82	0.12	2.7	155	250	11.66	34.80	0.11	26.52	152	0.58
309	11.02	34.74	0.08	2.8	146	300	11.13	34.75	0.08	26.58	147	0.66
359	10.56	34.70	0.08	2.9	140	400	9.95	34.66	0.08	26.72	134	0.80
457	9.02	34.62	0.08	3.2	123	500	8.38	34.59	0.11	26.92	115	0.93
546	7.78	34.56	0.12	3.3	108	600	7.23	34.54	0.09	27.04	103	1.04
655	6.76	34.52	0.07	3.4	98	700	6.41	34.52	0.07	27.14	93	1.15
794	5.70	34.53	0.15	3.5	84	800	5.66	34.53	0.15	27.25	83	1.25
928	4.98	34.53	0.17	3.7	75	1000	4.56	34.59	0.21	27.42	67	1.41
1043	4.34	34.60	0.28	3.6	64							
1094	4.15	34.58	0.35	3.6	63							

47 STRANGER; February 20, 1959; 1750 GCT; 20°41'N, 107°10'W; sounding, 1660 fm; wind, 360°, force 2; weather, partly cloudy; sea, moderate; wire angle, 03°.

0	24.6	34.51	-		477	0	24.6	34.51		23.11	477	0.00
11	24.44	34.51	4.63		472	10	24.45	34.51		23.16	472	0.05
25	24.12	34.60	4.66		456	20	24.23	34.56	4.65	23.26	463	0.09
40	23.51	34.77	4.61		427	30	23.98	34.66	4.66	23.41	448	0.14
55	20.82	34.63	3.07		365	50	22.26	34.71	3.86	23.94	397	0.22
75	18.40	34.54	1.97		312	75	18.40	34.54	1.97	24.84	312	0.31
105	15.06	34.69	0.38		226	100	15.53	34.67	0.48	25.62	237	0.38
165	12.70	34.76	0.18		174	150	13.00	34.75	0.20	26.22	181	0.49
196	12.06	34.78	0.15		161	200	12.00	34.78	0.15	26.44	160	0.57
230	11.64	34.78	0.10		154	250	11.42	34.78	0.11	26.54	150	0.65
310	10.72	34.73	0.13		141	300	10.85	34.74	0.12	26.62	143	0.73
359	10.04	34.65	0.10		136	400	9.45	34.62	0.10	26.77	128	0.87
458	8.65	34.60	0.10		118	500	8.12	34.56	0.10	26.93	114	1.00
547	7.55	34.52	0.10		108	600	7.10	34.52	0.09	27.05	102	1.11
657	6.66	34.52	0.08		96	700	6.32	34.52	0.09	27.16	92	1.22
796	5.64	34.52	0.14		84	800	5.61	34.52	0.14	27.24	84	1.31
930	4.90	34.54	0.19		74	1000	4.57	34.55	0.22	27.39	70	1.48
1045	4.37	34.56	0.27		67							
1095	4.14	34.52	0.35		68							

49 STRANGER; February 21, 1959; 1755 GCT; 22°42'N, 109°50'W; sounding, 850 fm; wind, 310°, force 2; weather, clear; sea, moderate; wire angle, 06°.

0	22.7	34.80	-		403	0	22.7	34.80		23.88	403	0.00
11	22.40	34.83	4.78		393	10	22.42	34.83		23.99	393	0.04
26	22.10	34.89	4.75		380	20	22.20	34.86	4.77	24.07	385	0.08
41	20.82	35.10	4.08		331	30	22.05	34.90	4.74	24.14	378	0.12
61	18.18	34.97	2.13		275	50	19.58	35.05	3.21	24.93	303	0.18
75	15.81	34.76	1.04		238	75	15.81	34.76	1.04	25.62	238	0.25
100	14.75	34.85	0.80		208	100	14.75	34.85	0.80	25.93	208	0.31
150	13.26	34.82	0.42		181	150	13.26	34.82	0.42	26.22	181	0.41
195	12.60	34.82	0.25		168	200	12.52	34.82	0.23	26.36	167	0.50
230	11.95	34.80	0.15		158	250	11.58	34.77	0.13	26.50	154	0.58
310	10.66	34.70	0.15		143	300	10.79	34.70	0.13	26.60	144	0.66
359	10.06	34.69	0.13		134	400	9.59	34.66	0.13	26.78	128	0.80
459	8.90	34.63	0.10		120	500	8.37	34.62	0.09	26.95	112	0.92
548	7.73	34.60	0.09		105	600	7.31	34.57	0.10	27.06	101	1.04
657	6.91	34.54	0.11		98	700	6.57	34.51	0.11	27.12	96	1.14
795	5.83	34.47	0.13		90	800	5.82	34.47	0.13	27.18	90	1.24
929	5.12	34.47	0.18		82	1000	4.59	34.49	0.28	27.34	75	1.42
1043	4.31	34.51	0.35		70							
1093	4.12	34.53	0.35		67							

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

STRANGER; February 22, 1959; 2055 GCT; 24°57.5'N, 112°35.5'W; sounding, 28 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 00°.

0	19.4	34.38	-	348	0	19.4	34.38		24.46	348	0.00
1	19.40	34.36	5.03	349	10	19.42	34.40	5.11	24.47	347	0.03
6	19.41	34.39	5.17	347	20	19.41	34.38	5.16	24.46	348	0.07
11	19.42	34.40	5.10	347	30	19.32	34.37	4.98	24.48	346	0.10
16	19.44	34.36	5.17	350							
21	19.40	34.38	5.16	348							
26	19.40	34.38	5.10	348							
31	19.29	34.37	4.97	346							
36	19.09	34.34	4.73	344							
41	19.03	34.34	4.68	342							

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

HUGH M. SMITH; September 4, 1959; 1505 GCT; 18°39'N, 103°59.5'W; sounding, 125 fm; wind, 270°, force 3; weather, partly cloudy; sea, slight; wire angle, 04°.[a] 68

1	29.52	33.85	4.13	0.30b)	674	0	(29.52)	(33.85)	(4.13)	(21.05)	(674)	(0.00)
11	29.54	33.84	4.05	0.22c)	675	10	29.54	33.84	4.06	21.04	675	0.07
31	29.14	34.00	4.25	0.20	651	20	29.35	33.93	4.18	21.17	663	0.13
51	24.54	34.42	3.08	0.73	481	30	29.20	33.99	4.25	21.28	652	0.20
75	17.56	34.67	0.84	2.03	283	50	24.60	34.42	3.10	23.04	483	0.31
100	15.30	34.74	0.16	2.23c)	228	75	17.56	34.67	0.84	25.15	283	0.41
125	14.24	34.78	0.13	2.51c)	203	100	15.30	34.74	0.16	25.72	228	0.48
164	13.06	34.79	0.11	2.40c)	179	150	13.95	34.78	0.12	26.05	197	0.58
205	12.57	34.80	0.18	2.34c)	169	200	12.62	34.80	0.17	26.33	170	0.67

HUGH M. SMITH; September 7, 1959; 0822 GCT; 15°39'N, 97°00'W; sounding, 700 fm; wind, 040°, force 1; weather, partly cloudy; sea, moderate; wire angle, 03°. 69

1	29.38	33.60	3.95	0.10	687	0	(29.38)	(33.60)	(3.95)	(20.91)	(687)	(0.00)
11	29.40	33.62	3.98	0.08	687	10	29.40	33.62	3.98	20.92	687	0.07
31	29.26	33.66	3.93	0.13	680	20	29.35	33.64	3.97	20.95	684	0.14
55	23.07	34.46	1.84	0.95	437	30	29.27	33.66	3.94	20.99	680	0.20
70	18.45	34.63	0.46	1.64	306	50	27.80	33.88	3.36	21.66	617	0.34
84	15.58	34.74	0.13	1.84	234	75	17.30	34.67	0.25	25.21	276	0.45
99	14.73	34.78	0.15	1.91	212	100	14.72	34.78	0.16	25.89	212	0.51
129	13.31	34.83	0.18	2.01d)	181	150	12.96	34.83	0.15	26.29	174	0.60
153	12.92	34.83	0.13	1.80d)	173	200	12.36	34.82	0.13	26.40	164	0.69
178	12.60	34.82	0.18	1.90	168	250	11.74	34.80	0.15	26.50	154	0.77
213	12.20	34.83	0.11	2.28d)	160	300	11.02	34.76	0.16	26.60	144	0.85
277	11.38	34.78	0.16	2.02	149	400	9.30	34.67	0.13	26.83	123	0.99
375	9.73	34.69	0.11	3.12	128	500	7.80	34.60	0.18	27.02	105	1.12
474	8.14	34.61	0.18	3.34d)	110	600	6.75	34.58	0.18	27.14	93	1.22
608	6.68	34.58	0.18	3.45	92	700	6.05	34.56	0.17	27.22	86	1.32
759	5.70	34.55	0.16	3.76d)	82	800	5.43	34.55	0.17	27.29	79	1.41
907	4.80	34.56	0.20	3.61	72	1000	4.40	34.57	0.32	27.42	66	1.58
1116	4.09	34.58	0.46	3.62	62							

HUGH M. SMITH; September 7, 1959; 1555 GCT; 15°00'N, 97°00'W; sounding, 1995 fm; wind, 290°, force 2; weather, partly cloudy; sea, slight; wire angle, 06°. 70

1	29.69	33.66	4.15	0.18	692	0	(29.69)	(33.66)	(4.15)	(20.86)	(692)	(0.00)
11	29.56	33.68	4.08	0.14	687	10	29.57	33.68	4.09	20.91	688	0.07
31	29.40	33.66	4.16	0.18	684	20	29.48	33.67	4.10	20.93	686	0.14
55	21.73	34.45	1.38	1.79	402	30	29.41	33.66	4.15	20.95	684	0.21
70	17.78	34.69	0.30	2.52	286	50	26.30	34.03	2.90	22.24	560	0.33
85	14.88	34.78	0.20	2.64	216	75	16.50	34.73	0.24	25.44	255	0.43
99	14.18	34.82	0.16	2.64e)	198	100	14.15	34.82	0.16	26.04	198	0.49
129	13.39	34.81	0.16	2.77	184	150	12.88	34.87	0.16	26.34	170	0.58
153	12.80	34.87	0.16	2.67e)	168	200	12.20	34.84	0.17	26.45	159	0.67
178	12.46	34.85	0.20	2.85e)	164	250	11.51	34.80	0.16	26.55	149	0.75
213	12.04	34.84	0.16	2.83	156	300	10.80	34.73	0.17	26.62	143	0.82
276	11.14	34.77	0.16	2.94	146	400	9.35	34.61	0.19	26.78	128	0.97
374	9.75	34.61	0.18	3.16e)	134	500	7.66	34.61	0.21	27.04	103	1.09
472	8.05	34.61	0.21	3.42e)	108	600	6.69	34.60	0.21	27.17	91	1.20
605	6.66	34.60	0.21	3.34e)	90	700	6.05	34.57	0.20	27.23	85	1.30
759	5.74	34.56	0.18	3.66e)	82	800	5.55	34.56	0.18	27.28	80	1.39
907	5.11	34.56	0.18	3.50e)	75	1000	4.72	34.57	0.25	27.39	70	1.56
1116	4.22	34.59	0.39	3.60e)	63							

a) The hydrographic, biological and optical data collected by Tuna Oceanography Research (STOR) of Scripps Institution on Cruise TO-59-2 have been published in U. S. Fish and Wildlife Service Special Scientific Report--Fisheries No. 420. The first stations of the cruise were occupied off Baja California in the CCOFI pattern at the same time that other Scripps vessels were taking observations to the north on CCOFI Cruise 5908. These stations by RV Hugh M. Smith appear on pages 345 to 363 of this volume with the CCOFI 5908 observations. The TO-59-2 stations occupied in the Gulf of Tehuantepec, Nos. 68 through 87, are presented here.

b) The following nitrite values were obtained for this station: 1 m, 0.01; 31, 0.0; 75, 0.0; 125, 0.0; 205, 0.64 µg at/L. The following nitrate values were also obtained: 1 m, 1.3; 31, 1.3; 125, 90.3 µg at/L.

c) Duplicate values: 11 m, 0.30; 100, 2.31; 125, 2.35; 164, 2.21; 205, 2.09 µg at/L.

d) Duplicate values: 129 m, 1.93; 153, 1.94; 213, 2.00; 474, 3.46; 759, 3.19 µg at/L.

e) Duplicate values: 99 m, 2.76; 153, 2.72; 178, 2.67; 374, 3.08; 472, 3.58; 605, 3.50; 759, 3.79; 907, 3.60; 1116, 3.50 µg at/L.

SIO

TO-59-2

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

71

HUGH M. SMITH; September 8, 1959; 0140 GCT; 14°19'N, 97°02'W; sounding, 1950 fm; wind, 090°, force 2; weather, cloudy; sea, moderate; wire angle, 11°.

1	29.86	33.64	4.13	0.17	700	0	(29.86)	(33.64)	(4.13)	(20.78)	(700)	(0.00)
11	29.72	33.66	4.11	0.44a)	694	10	29.73	33.66	4.11	20.84	694	0.07
30	29.31	33.66	4.05	0.18	681	20	29.50	33.66	4.08	20.92	687	0.14
60	19.33	34.59	0.95	-	330	30	29.31	33.66	4.05	20.98	681	0.21
79	16.02	34.76	0.18	2.33a)	242	50	25.00	34.18	1.47	22.74	512	0.33
93	14.82	34.81	0.18	2.63a)	213	75	16.85	34.72	0.27	25.35	264	0.42
108	13.84	34.82	0.18	2.64a)	192	100	14.47	34.82	0.18	25.96	205	0.48
137	13.14	34.87	0.20	2.66	174	150	12.84	34.86	0.19	26.34	170	0.58
162	12.60	34.85	0.16	2.72	166	200	12.05	34.83	0.11	26.47	157	0.66
191	12.16	34.83	0.11	2.93a)	159	250	11.42	34.81	0.12	26.57	148	0.74
225	11.74	34.83	0.11	2.66	151	300	10.71	34.75	0.13	26.65	140	0.82
293	10.82	34.76	0.13	2.43a)	141	400	9.07	34.63	0.11	26.84	122	0.95
400	9.07	34.63	0.11	3.39	122	500	7.86	34.58	0.11	26.99	108	1.08
507	7.79	34.99r	0.11	3.46a)		600	6.97	34.56	0.10	27.10	97	1.19
644	6.63	34.56	0.10	3.46	93	700	6.25	34.55	0.11	27.19	88	1.29
800	5.65	34.54	0.13	3.70	82	800	5.65	34.54	0.13	27.26	82	1.39
966	4.76	34.56	0.26	3.70	71	1000	4.60	34.56	0.32	27.40	69	1.56
1175	3.96	34.56	0.46	3.72a)	63	1200	(3.88)	(34.56)		(27.47)	(62)	(1.71)

72

HUGH M. SMITH; September 8, 1959; 0811 GCT; 13°39.5'N, 97°00'W; sounding, 2000 fm; wind, 090°, force 1; weather, partly cloudy; sea, slight; wire angle, 21°.

1	29.54	33.73	4.13	0.19	683	0	(29.54)	(33.73)	(4.13)	(20.96)	(683)	(0.00)
10	29.56	33.73	4.10	0.12b)	684	10	29.56	33.73	4.10	20.95	684	0.07
28	29.25	33.71	4.10	0.24	675	20	29.38	33.72	4.10	21.01	679	0.14
55	19.58	34.61	1.38	2.02b)	335	30	29.23	33.71	4.10	21.05	674	0.20
72	15.49	34.81	0.46	2.48b)	226	50	23.00	34.39	2.12	23.49	440	0.32
86	14.42	34.81	0.49	2.44	204	75	15.37	34.81	0.45	25.76	224	0.40
98	13.92	34.81	0.36	2.54	194	100	13.88	34.81	0.35	26.08	194	0.45
124	13.38	34.85	0.30	2.52b)	181	150	12.99	34.84	0.27	26.29	174	0.54
146	13.04	34.84	0.26	2.55b)	175	200	12.06	34.80	0.16	26.44	160	0.63
172	12.68	34.83	0.33	2.55b)	169	250	11.61	34.79	0.13	26.52	152	0.71
202	12.02	34.80	0.15	2.89b)	159	300	10.96	34.75	0.16	26.61	144	0.79
262	11.50	34.79	0.13	2.95b)	150	400	9.24	34.64	0.16	26.81	124	0.93
358	10.01	34.69	0.18	3.26	133	500	7.90	34.57	0.11	26.97	110	1.06
453	8.40	34.59	0.11	3.48b)	115	600	7.02	34.56	0.14	27.09	98	1.17
575	7.24	34.56	0.13	3.51b)	101	700	6.09	34.57	0.18	27.22	86	1.27
718	5.96	34.57	0.18	3.57	84	800	5.46	34.56	0.17	27.30	78	1.36
873	5.10	34.56	0.16	3.68	75	1000	4.60	34.55	0.26	27.39	70	1.53
1074	4.30	34.55	0.34	3.74	67							

a) Duplicate values: 11 m, 0.18; 79, 2.58; 93, 2.75; 108, 2.72; 191, 2.45; 293, 2.22; 507, 3.36; 1175, 3.59 µg at/L.
b) Duplicate values: 10 m, 0.20; 55, 1.92; 72, 2.38; 124, 2.18; 146, 2.73; 172, 2.63; 202, 2.81; 262, 2.73; 453, 3.40; 575, 3.59 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

73

HUGH M. SMITH; September 8, 1959; 1917, 1948, 2030 GCT; 13°42.5'N, 95°56'W; sounding, 2000 fm; wind, 090°, force 1; weather, partly cloudy; sea, rough; wire angle, 19°, 20°, 16°.

2	29.50	33.60	4.10	0.14	691	0	(29.50)	(33.60)	(4.10)	(20.88)	(691)	(0.00)
10	29.50	33.61	4.13	0.24	690	10	29.50	33.61	4.13	20.89	690	0.07
30	29.10	33.68	3.97	0.31	672	20	29.33	33.64	4.07	20.96	682	0.14
39	24.59	34.35	2.75	1.14	488	30	29.10	33.68	3.97	21.07	672	0.20
48	19.70	34.60	0.82	2.26	339	50	18.40	34.66	0.46	24.93	303	0.30
56	16.74	34.74	0.20	2.69a)	259	75	14.78	34.83	0.29	25.91	210	0.37
81	14.43	34.83	0.31	2.26a)	203	100	13.63	34.82	0.31	26.15	188	0.42
103	13.56	34.82	0.31	2.52a)	186	150	12.91	34.83	0.41	26.30	173	0.51
149	12.92	34.83	0.41	2.52	173	200	12.19	34.83	0.24	26.44	160	0.60
182	12.46	34.83	0.31	2.35a)	165	250	11.63	34.83	0.15	26.55	150	0.68
						300	11.12	34.81	0.14	26.63	142	0.75
214	12.01	34.83	0.20	2.78	157	400	9.70	34.69	0.16	26.78	127	0.89
279	11.36	34.83	0.13	2.95	145	500	7.94	34.60	0.14	26.99	108	1.02
382	10.04	34.72	0.16	3.14a)	131	600	6.95	34.56	0.12	27.10	97	1.13
483	8.17	34.61	0.15	3.44	110	700	6.19	34.57	0.10	27.21	86	1.23
614	6.82	34.56	0.11	3.60	96	800	5.56	34.58	0.13	27.30	78	1.32
766	5.78	34.58	0.10	3.74	81	1000	4.49	34.57	0.31	27.41	68	1.49
928	4.82	34.57	0.23	3.81	71							
1148	3.96	34.58	0.44	2.25a)	61							

74

HUGH M. SMITH; September 9, 1959; 0445 GCT; 14°20'N, 95°59'W; sounding, 1850 fm; wind, 030°, force 2; weather, partly cloudy; sea, moderate; wire angle, 17°.

1	29.62	33.63	4.18	0.21	693	0	(29.62)	(33.63)	(4.18)	(20.85)	(693)	(0.00)
10	29.26	33.62	4.16	0.22	682	10	29.26	33.62	4.16	20.97	682	0.07
29	28.92	33.62	4.28	0.27	670	20	29.14	33.62	4.20	21.01	678	0.14
38	25.66	34.29	3.28	0.91	523	30	28.85	33.63	4.27	21.10	669	0.20
43	20.56	34.61	1.62	1.94b)	360	50	17.90	34.72	1.16	25.10	287	0.30
52	17.32	34.74	1.03	2.15b)	272	75	15.08	34.78	0.32	25.81	220	0.36
71	15.10	34.78	0.33	2.80b)	221	100	14.13	34.83	0.27	26.05	197	0.42
103	14.04	34.83	0.26	2.88	196	150	13.01	34.83	0.15	26.28	175	0.51
144	13.14	34.83	0.16	2.38b)	178	200	12.10	34.81	0.13	26.44	160	0.60
180	12.40	34.81	0.11	2.99b)	165	250	11.42	34.77	0.16	26.54	150	0.68
212	11.95	34.81	0.15	3.12b)	157	300	10.65	34.70	0.15	26.63	142	0.75
274	11.07	34.74	0.16	3.24	147	400	9.00	34.64	0.11	26.85	121	0.89
375	9.41	34.65	0.10	3.53	126	500	7.58	34.61	0.16	27.05	102	1.01
477	7.82	34.62	0.16	3.74	105	600	6.69	34.58	0.13	27.16	92	1.12
607	6.65	34.58	0.13	3.74	92	700	5.99	34.56	0.15	27.24	84	1.21
758	5.60	34.56	0.16	3.90	80	800	5.35	34.56	0.18	27.31	77	1.30
920	4.76	34.57	0.21	3.72	70	1000	4.42	34.57	0.31	27.42	67	1.47
1125	3.98	34.57	0.51	3.92b)	62							

a) Duplicate values: 56 m, 2.61; 81, 2.57; 103, 2.64; 182, 2.67; 382, 2.99; 1148, 3.06 µg at/L.
b) Duplicate values: 43 m, 1.87; 52, 2.28; 71, 2.90; 144, 2.90; 180, 2.88; 212, 2.99; 1125, 3.74 µg at/L.

SIO

TO-59-2

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

75 HUGH M. SMITH; September 9, 1959; 1206 GCT; 15°01.5'N, 96°03'W; sounding, 2100 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.

0	29.00	33.66	4.29	0.21	671	0	29.00	33.66	4.29	21.07	671	0.00
10	28.98	33.65	4.33	0.21a)	671	10	28.98	33.65	4.33	21.07	671	0.07
24	28.62	33.61	4.33	0.21	662	20	28.80	33.62	4.33	21.12	667	0.13
34	26.77	33.99	4.06	0.60	578	30	28.40	33.63	4.31	21.27	654	0.20
44	20.84	34.61	2.03	1.79	368	50	18.55	34.72	1.22	24.94	302	0.30
53	17.90	34.74	1.03	2.17a)	285	75	15.08	34.80	0.33	25.82	219	0.36
72	15.32	34.79	0.36	2.67a)	224	100	13.81	34.84	0.26	26.12	190	0.41
105	13.66	34.84	0.26	2.92	187	150	12.70	34.85	0.16	26.36	167	0.50
148	12.72	34.85	0.16	3.07	168	200	11.99	34.83	0.14	26.48	156	0.59
187	12.14	34.85	0.16	3.06	157	250	11.44	34.78	0.13	26.54	150	0.67
221	11.76	34.79	0.13	3.06a)	155	300	10.78	34.75	0.13	26.64	141	0.74
288	10.97	34.76	0.13	3.36	143	400	9.09	34.62	0.13	26.83	123	0.88
394	9.20	34.63	0.13	3.76a)	124	500	7.52	34.60	0.13	27.05	102	1.00
500	7.52	34.60	0.13	3.71	102	600	6.60	34.58	0.13	27.17	91	1.11
636	6.34	34.58	0.13	4.02a)	88	700	5.96	34.57	0.14	27.24	84	1.20
791	5.46	34.56	0.16	4.02	79	800	(5.41)	(34.56)	(0.16)	(27.30)	(78)	(1.30)

76 HUGH M. SMITH; September 9, 1959; 1910 GCT; 15°35'N, 96°02.5'W; sounding, 600 fm; wind, 040°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

1	30.23	33.19	4.20	0.06b)	743	0	(30.23)	(33.19)	(4.20)	(20.34)	(743)	(0.00)
11	29.54	33.44	4.10	0.13	704	10	29.56	33.44	4.10	20.74	704	0.07
31	28.35	33.81	3.70	0.37	640	20	29.46	33.47	4.07	20.79	699	0.14
41	24.05	34.34	2.84	1.17	473	30	28.60	33.75	3.77	21.28	652	0.21
51	21.25	34.56	1.88	1.75	382	50	21.50	34.55	1.93	24.03	389	0.31
65	19.68	34.63	1.51	1.94b)	336	75	18.20	34.70	1.05	25.01	296	0.40
80	17.25	34.74	0.72	2.47	270	100	15.00	34.81	0.23	25.84	217	0.47
110	14.02	34.83	0.16	2.66b)	195	150	12.99	34.85	0.16	26.29	174	0.56
154	12.82	34.85	0.16	2.92b)	171	200	12.26	34.83	0.12	26.43	161	0.65
178	12.50	34.85	0.13	2.99	164	250	11.61	34.80	0.13	26.52	152	0.73
213	12.12	34.82	0.11	3.00	159	300	10.87	34.76	0.15	26.63	142	0.81
277	11.20	34.78	0.15	3.28	146	400	9.40	34.68	0.14	26.83	123	0.95
375	9.78	34.72	0.13	3.37	128	500	7.96	34.62	0.14	27.01	106	1.07
474	8.31	34.91c)	0.15	3.80		600	6.70	34.57	0.10	27.15	93	1.18
607	6.60	34.57	0.10	3.78b)	92	700	5.84	34.55	0.13	27.24	84	1.27
760	5.50	34.54	0.15	4.07	80	800	5.30	34.54	0.16	27.30	78	1.36
909	4.84	34.56	0.21	4.07	72	1000	4.51	34.59	0.30	27.43	66	1.53
1019	4.44	34.60	0.31	4.07	65							

77 HUGH M. SMITH; September 10, 1959; 1655 GCT; 15°41.5'N, 95°54'W; sounding, 150 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 50°.

2	29.10	33.53	4.16	0.24	684	0	(29.10)	(33.53)	(4.16)	(20.95)	(684)	(0.00)
9	29.11	33.52	4.18	0.23	684	10	29.11	33.53	4.17	20.95	684	0.07
22	29.10	33.53	3.92	0.27	684	20	29.10	33.53	3.94	20.95	684	0.14
29	28.86	33.57	4.21	0.29	673	30	28.80	33.58	4.21	21.09	670	0.20
35	27.52	33.83	3.46	0.62	612	50	18.65	34.66	1.20	24.87	309	0.30
44	20.76	34.51	1.75	1.97d)	372	75	15.20	34.83	0.34	25.82	219	0.37
55	16.98	34.76	0.66	2.63d)	263	100	13.92	34.86	0.27	26.12	190	0.42
67	15.56	34.82	0.39	2.91	227	150	12.90	34.81	0.14	26.29	174	0.51
89	14.35	34.85	0.30	2.84	200	200	(12.29)	(34.83)		(26.42)	(162)	(0.60)
119	13.36	34.86	0.20	3.16d)	180							
152	12.86	34.81	0.13	3.19	174							
188	12.42	34.82	0.13	3.16	165							

a) Duplicate values: 10 m, 0.31; 53, 2.37; 72, 2.55; 221, 3.22; 394, 3.66; 636, 3.82 µg at/L.
b) Duplicate values: 1 m, 0.14; 65, 2.06; 110, 2.92; 154, 2.56; 607, 2.90 µg at/L.
c) Possible evaporation; value does not fall on property curve.
d) Duplicate values: 44 m, 1.85; 55, 2.48; 119, 3.04 µg at/L.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

78

HUGH M. SMITH; September 11, 1959; 0137 GCT; 14°55'N, 95°07'W; sounding, 1350 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 31°.

2	28.90	33.83	4.20	0.38a)	655	0	(28.90)	(33.83)	(4.20)	(21.25)	(655)	(0.00)
10	28.91	33.82	4.16	0.44	656	10	28.91	33.82	4.16	21.24	656	0.06
31	21.95	34.49	2.47	1.32	405	20	28.90	33.82	4.16	21.24	656	0.13
48	17.28	34.67	0.44	2.34	276	30	22.40	34.47	2.61	23.72	418	0.18
64	15.34	34.81	0.16	2.31b)	223	50	17.07	34.70	0.40	25.29	269	0.25
77	14.48	34.78	0.20	2.51b)	207	75	14.55	34.78	0.20	25.92	209	0.32
100	13.66	34.83	0.20	2.68	188	100	13.66	34.83	0.20	26.14	188	0.36
128	13.00	34.83	0.16	2.69	175	150	12.63	34.83	0.12	26.35	168	0.46
146	12.69	34.83	0.11	2.68	168	200	12.12	34.83	0.10	26.45	158	0.54
174	12.42	34.79	0.21	2.85b)	167	250	11.50	34.80	0.10	26.55	150	0.62
202	12.10	34.83	0.10	3.26	158	300	10.92	34.77	0.10	26.64	141	0.70
255	11.44	34.80	0.10	3.32	149	400	9.60	34.69	0.10	26.80	126	0.84
348	10.31	34.74	0.10	2.89b)	134	500	8.19	34.62	0.10	26.97	110	0.96
449	8.89	34.64	0.11	3.95	118	600	7.13	34.59	0.10	27.10	98	1.08
560	7.50	34.60	0.10	4.14	102	700	6.35	34.57	0.10	27.19	89	1.18
688	6.43	34.57	0.10	4.12	90	800	5.67	34.56	0.11	27.27	81	1.27
825	5.50	34.56	0.13	4.29b)	79	1000	4.45	34.56	0.30	27.41	68	1.44
1045	4.24	34.56	0.36	4.46b)	66							

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HUGH M. SMITH; September 11, 1959; 0936 GCT; 14°23.5'N, 94°57.5'W; sounding, 2350 fm; wind, 040°, force 5; weather, rain; sea, very rough; wire angle, 26°.

2	29.02	33.72c)	4.25	0.39d)		0	(29.02)	(33.56)	(4.25)	(21.00)	(679)	(0.00)
10	29.08	33.56	4.23	0.28	678	10	29.08	33.56	4.23	20.98	681	0.07
20	27.02	34.09	4.41	0.57	579	20	27.02	34.09	4.41	22.04	579	0.13
29	22.50	34.49	2.02	1.97	419	30	21.65	34.53	1.64	23.98	394	0.18
46	16.10	34.76	0.25	3.06d)	243	50	15.70	34.79	0.25	25.67	233	0.24
70	14.56	34.85	0.26	3.26	204	75	14.32	34.83	0.31	26.02	200	0.30
99	13.56	34.80	0.43	3.11d)	188	100	13.55	34.80	0.43	26.13	188	0.35
126	13.18	-	-	-		150	12.84	34.83	0.48	26.31	172	0.44
148	12.88	34.83	0.49	3.00	173	200	12.30	34.83	0.29	26.42	162	0.52
174	12.50	34.83	0.33	3.34d)	165	250	11.60	34.79	0.26	26.52	152	0.60
206	12.25	34.83	0.28	3.34	161	300	10.98	34.75	0.20	26.61	144	0.68
259	11.46	34.78	0.25	3.36	150	400	9.74	34.69	0.18	26.78	128	0.82
357	10.36	34.72	0.18	3.71d)	136	500	8.12	34.61	0.14	26.97	110	0.95
455	8.87	34.64	0.18	4.15	118	600	6.84	34.58	0.11	27.13	94	1.06
581	7.01	34.58	0.11	4.39d)	97	700	6.10	34.58	0.12	27.23	85	1.16
726	5.93	34.58	0.13	4.23	83	800	5.49	34.58	0.14	27.31	77	1.25
883	5.00	34.58	0.18	4.67	72	1000	4.48	34.58	0.31	27.43	66	1.42
1091	4.11	34.58	0.43	4.54d)	63							

a) The following nitrite values were obtained for this station: 2 m, 0.02; 31, 0.63; 64, 0.03; 100, 0.0; 146, 0.0; 202, 0.0; 348, 1.39; 560, 0.66; 825, 0.0 µg at/L.
b) Duplicate values: 64 m, 2.56; 77, 2.61; 174, 2.65; 348, 3.97; 825, 4.12; 1045, 4.22 µg at/L.
c) Possible evaporation; value does not fall on property curve.
d) Duplicate values: 2 m, 0.47; 46, 3.16; 99, 2.61; 174, 3.15; 357, 3.03; 581, 4.23; 1091, 4.65 µg at/L.

81 HUGH M. SMITH; September 11, 1959; 1630 GCT; 13°39.5'N, 95°00'W; sounding, 2100 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 10°.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
1	29.09	33.58	4.28	0.38	680	0	(29.09)	(33.58)	(4.28)	(20.99)	(680)	(0.00)
11	29.02	33.57	4.29	0.37	679	10	29.04	33.57	4.29	21.00	679	0.07
30	21.20	34.56	1.93	1.86	380	20	26.00	34.05	2.99	22.33	551	0.13
40	18.44	34.67	0.82	3.71a)	303	30	21.20	34.56	1.93	24.12	380	0.18
50	16.46	34.79	0.52	3.04a)	249	50	16.46	34.79	0.82	25.50	249	0.24
79	14.73	34.81	0.46	3.17	211	75	15.14	34.80	0.47	25.81	220	0.30
108	13.70	34.87	0.38	3.10	186	100	14.00	34.86	0.40	26.10	192	0.35
137	13.04	34.85	0.30	3.13	174	150	12.82	34.83	0.23	26.31	172	0.44
161	12.62	34.81	0.21	3.32a)	170	200	12.08	34.81	0.27	26.45	159	0.53
190	12.20	34.81	0.30	3.01a)	161	250	11.47	34.82	0.16	26.57	148	0.61
224	11.79	34.83	0.18	3.92a)	153	300	10.82	34.77	0.15	26.65	140	0.68
292	10.93	34.78	0.16	3.37a)	141	400	9.21	34.66	0.10	26.84	122	0.82
399	9.22	34.66	0.10	3.96	122	500	7.65	34.61	0.13	27.04	103	0.94
507	7.56	34.61	0.13	4.43a)	102	600	6.62	34.58	0.11	27.17	91	1.05
643	6.28	34.58	0.10	4.45	87	700	5.90	34.58	0.10	27.26	82	1.14
798	5.36	34.58	0.13	4.45	76	800	5.35	34.58	0.13	27.33	76	1.23
966	4.67	34.56	0.25	4.58a)	70	1000	4.54	34.56	0.29	27.40	69	1.40
1174	4.08	34.56	0.48	4.43a)	64	1200	(4.02)	(34.56)		(27.46)	(63)	(1.55)

82 HUGH M. SMITH; September 12, 1959; 0540, 0625 GCT; 13°40'N, 94°00'W; sounding, 2250 fm; wind, 320°, force 2; weather, clear; sea, rough; wire angle, 03°, 06°.

1	29.34	34.00	4.39	0.51	658	0	(29.34)	(34.00)	(4.39)	(21.23)	(658)	(0.00)
11	28.28	34.02	4.82	0.56	622	10	28.30	34.02	4.81	21.60	622	0.06
26	25.90	34.14	3.90	0.98	541	20	27.70	34.04	4.66	21.81	602	0.12
50	15.34	34.72	0.59	2.92	230	30	20.80	34.43	2.19	24.13	379	0.17
80	14.02	34.94r	0.46	3.07		50	15.34	34.72	0.59	25.70	230	0.24
95	13.59	34.81	0.44	3.10	188	75	14.16	34.77	0.46	26.00	202	0.29
109	13.36	34.88	0.39	2.70b)	178	100	13.51	34.83	0.41	26.18	184	0.34
139	12.82	34.83	0.49	2.94b)	172	150	12.71	34.83	0.53	26.34	169	0.43
164	12.54	34.84	0.56	3.06b)	166	200	11.99	34.82	0.26	26.48	156	0.51
193	12.10	34.83c)	0.28	3.26	158	250	11.30	34.77	0.19	26.56	148	0.59
227	11.56	34.79	0.23	3.30	152	300	10.76	34.74	0.11	26.63	142	0.67
296	10.81	34.74	0.11	3.46	142	400	9.34	34.65	0.16	26.82	124	0.81
404	9.27	34.65	0.16	4.20	124	500	7.89	34.56	0.14	26.97	109	0.93
512	7.72	34.56	0.13	4.30	107	600	6.81	34.56	0.15	27.12	96	1.04
650	6.39	34.56	0.16	4.30	90	700	6.00	34.56	0.15	27.22	86	1.14
						800	5.34	34.55	0.11	27.30	78	1.24
808	5.30	34.55	0.11	4.45	78	1000	4.43	34.58	0.34	27.43	66	1.40
977	4.53	34.58	0.30	3.71b)	67	1200	(3.72)	(34.58)		(27.50)	(59)	(1.54)
1186	3.77	34.58	0.57	4.44	60							

a) Duplicate values: 40 m, 2.87; 50, 3.70; 161, 3.42; 190, 3.13; 224, 3.08; 292, 3.65; 507, 4.27; 966, 4.38; 1174, 4.12 µg at/L.

b) Duplicate values: 109 m, 3.13; 139, 3.00; 164, 2.96; 977, 3.48 µg at/L.

c) Possible evaporation; value falls on property curve.

OBSERVED					COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

HUGH M. SMITH; September 12, 1959; 1310 GCT; 14°21.5'N, 94°07'W; sounding, 2500 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°. 83

2	29.41	33.34	4.23	0.29a)	708	0	(29.41)	(33.34)	(4.23)	(20.70)	(708)	(0.00)
12	29.38	33.40	4.29	0.33	702	10	29.39	33.39	4.28	20.76	702	0.07
36	26.12	34.00	3.28	1.06a)	557	20	28.15	33.69	3.89	21.38	642	0.14
65	16.90	34.75	0.52	2.95	262	30	27.25	33.83	3.63	21.78	604	0.20
89	15.20	34.78	0.33	3.02	223	50	22.80	34.29	2.20	23.47	442	0.30
104	14.84	34.79	0.31	3.07	215	75	16.02	34.77	0.40	25.58	241	0.39
118	14.38	34.81	0.25	3.15	203	100	14.98	34.79	0.32	25.83	218	0.45
152	13.74	34.83	0.20	3.12a)	189	150	13.79	34.83	0.20	26.12	190	0.55
176	13.51	34.83	0.20	3.22a)	185	200	13.30	34.85	0.26	26.23	180	0.65
210	13.20	34.85	0.28	3.13a)	178	250	12.62	34.77	0.19	26.31	172	0.74
244	12.76	34.78	0.20	3.22a)	174	300	10.84	34.74	0.13	26.62	143	0.82
311	10.44	34.73	0.13	3.68	137	400	7.74	34.62	0.13	27.04	104	0.95
427	7.30	34.60	0.13	4.20	99	500	6.73	34.58	0.12	27.14	93	1.06
553	6.42	34.57	0.11	4.32a)	90	600	6.19	34.57	0.14	27.21	87	1.15
694	5.77	34.57	0.18	4.32	82	700	5.73	34.57	0.18	27.27	81	1.24
854	5.02	34.54	0.20	4.46	76	800	5.30	34.55	0.19	27.31	78	1.34
1020	4.37	34.56	0.36	4.42	67	1000	4.43	34.56	0.32	27.41	68	1.50
1272	3.56	34.58	0.69	4.42	57	1200	3.76	34.57	0.61	27.50	60	1.65

HUGH M. SMITH; September 14, 1959; 0540 GCT; 16°28'N, 99°32.5'W; sounding, 650 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 22°. 84

1	29.60	33.14	3.97	0.29	728	0	(29.60)	(33.14)	(3.97)	(20.49)	(728)	(0.00)
19	29.34	33.35	4.28	0.35	703	10	29.50	33.25	4.16	20.61	717	0.07
29	29.04	33.49	4.08	0.46	685	20	29.33	33.36	4.28	20.75	703	0.14
38	26.88	34.14	3.08	0.89	570	30	29.02	33.50	4.07	20.95	684	0.21
52	21.58	34.51	1.69	2.31	394	50	21.80	34.50	1.77	23.91	400	0.32
74	16.63	34.68	0.25	3.45b)	261	75	16.52	34.69	0.26	25.40	258	0.40
92	14.78	34.81	0.46	2.96b)	212	100	14.35	34.80	0.32	25.98	204	0.46
119	13.84	34.78	0.18	2.69b)	195	150	12.91	34.83	0.16	26.30	173	0.56
141	13.12	34.83	0.15	3.48	177	200	12.22	34.83	0.18	26.43	161	0.64
164	12.68	34.83	0.18	3.43	168	250	11.69	34.78	0.16	26.50	154	0.73
195	12.28	34.83	0.18	3.51b)	162	300	11.12	34.74	0.16	26.58	147	0.80
253	11.65	34.78	0.16	3.54	154	400	9.49	34.66	0.19	26.79	127	0.95
343	10.51	34.71	0.16	3.84	139	500	7.93	34.60	0.17	27.00	107	1.07
434	8.88	34.63	0.20	4.26b)	119	600	6.84	34.56	0.17	27.12	96	1.18
558	7.23	34.58	0.16	4.33	100	700	6.11	34.54	0.20	27.20	88	1.29
701	6.10	34.54	0.20	4.74	88	800	5.54	34.54	0.17	27.27	81	1.38
842	5.34	34.54	0.16	4.69b)	79	1000	4.59	34.55	0.29	27.39	70	1.55
1043	4.38	34.55	0.33	4.67	68							

HUGH M. SMITH; September 18, 1959; 0442 GCT; 20°09'N, 106°32'W; sounding, 2050 fm; wind, 340°, force 3; weather, partly cloudy; sea, slight; wire angle, 08°. 87

1	28.45	33.99	4.13	0.26	630	0	(28.45)	(33.99)	(4.13)	(21.51)	(630)	(0.00)
11	28.46	33.93	4.16	0.32	635	10	28.46	33.95	4.15	21.47	634	0.06
30	27.83	34.04	4.20	0.58c)	607	20	27.94	34.02	4.20	21.70	612	0.12
59	25.30	34.42	4.10	0.58	503	30	27.83	34.04	4.20	21.76	607	0.19
79	21.38	34.45	3.29	1.28	393	50	26.80	34.24	4.17	22.23	561	0.30
93	18.49	34.52	1.61	2.42c)	315	75	22.35	34.44	3.61	23.71	420	0.43
108	16.64	34.78	0.82	2.99	254	100	18.15	34.55	1.42	24.91	305	0.52
137	14.11	34.71	0.36	3.49c)	205	150	13.59	34.78	0.21	26.12	190	0.64
161	13.24	34.81	0.15	3.67	181	200	12.35	34.79	0.14	26.38	166	0.73
191	12.51	34.79	0.16	3.49c)	169	250	11.60	34.78	0.13	26.51	153	0.81
225	11.98	34.79	0.11	3.72c)	159	300	10.85	34.71	0.16	26.59	145	0.89
293	10.97	34.72	0.16	3.90	146	400	9.26	34.52	0.20	26.72	133	1.04
401	9.24	34.52	0.20	3.77c)	133	500	7.76	34.50	0.13	26.94	112	1.17
508	7.64	34.50	0.13	4.28	111	600	6.59	34.50	0.22	27.10	97	1.28
645	6.21	34.51	0.26	4.54c)	92	700	5.86	34.53	0.26	27.22	86	1.38
803	5.31	34.55	0.26	4.44	78	800	5.32	34.55	0.26	27.30	78	1.47
971	4.45	34.52	0.33	4.57	71	1000	4.34	34.51	0.38	27.39	70	1.64
1178	3.80	34.49	0.62	4.30	66	1200	(3.75)	(34.49)		(27.43)	(66)	(1.79)

a) Duplicate values: 2 m, 0.37; 36, 0.90; 152, 2.99; 176, 3.13; 210, 3.22; 244, 3.15; 553, 4.45 µg at/L.
b) Duplicate values: 74 m, 3.33; 92, 3.36; 119, 2.79; 195, 3.37; 434, 4.49; 842, 4.95 µg at/L.
c) Duplicate values: 30 m, 0.35; 93, 2.32; 137, 3.27; 191, 3.33; 225, 3.49; 401, 4.08; 645, 4.28 µg at/L.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m	

SPENCER F. BAIRD; April 16, 1959; 0220 GCT; 30°55.5'N, 113°13'W; sounding, 6 fm; wind, 080°, force 4; weather, partly cloudy; sea, rough; wire angle, 02°. 3 (103G.80)

0	21.62	35.61	4.86	316	0	21.62	35.61	4.86	24.80	316	0.00
5	21.65	35.64	5.00	314							

SPENCER F. BAIRD; April 16, 1959; 0344 GCT; 30°50.5'N, 113°22.5'W; sounding, 30 fm; wind, 100°, force 4; weather, partly cloudy; sea, rough; wire angle, 05°. 4 (103G.70)

0	20.52	35.52	5.53	293	0	20.52	35.52	5.53	25.04	293	0.00
10	20.52	35.53	5.60	292	10	20.52	35.53	5.60	25.05	292	0.03
20	19.00	35.38	5.59a)	265	20	19.00	35.38	5.59	25.33	265	0.06
29	18.12	35.35	4.63	246	30	18.11	35.35	4.62	25.53	246	0.08
39	17.95	35.37	4.45	240							
49	17.78	35.35	4.18	238							

SPENCER F. BAIRD; April 16, 1959; 0535 GCT; 30°43.5'N, 113°36.5'W; sounding, 44 fm; wind, 100°, force 4; weather, cloudy; sea, rough; wire angle, 08°. 5 (103G.55)

1	19.90	35.55	5.34	275	0	(19.90)	(35.55)	(5.34)	(25.23)	(275)	(0.00)
11	19.91	35.55	5.42	275	10	19.91	35.55	5.41	25.23	275	0.03
20	18.24	35.52	5.70	237	20	18.24	35.52	5.70	25.63	237	0.05
30	16.83	35.43	3.92	211	30	16.83	35.43	3.92	25.90	211	0.08
49	16.37	35.37	3.02	204	50	16.36	35.37	3.01	25.97	204	0.12
69	16.25	35.39	2.74	201							

SPENCER F. BAIRD; April 16, 1959; 0727 GCT; 30°36'N, 113°52'W; sounding, 48 fm; wind, 130°, force 4; weather, partly cloudy; sea, rough; wire angle, 06°. 6 (103G.40)

2	20.00	35.56	5.55	277	0	(20.00)	(35.56)	(5.55)	(25.20)	(277)	(0.00)
12	19.97	35.55	5.52	276	10	19.98	35.55	5.53	25.21	276	0.03
21	17.76	35.55	5.44	223	20	17.96	35.55	5.46	25.72	228	0.05
31	16.98	35.45	4.60	212	30	17.04	35.46	4.70	25.87	214	0.07
51	16.44	35.46	3.68	200	50	16.45	35.46	3.70	26.02	200	0.12
75	15.54	35.30	2.23	192	75	15.54	35.30	2.23	26.10	192	0.16

SPENCER F. BAIRD; April 16, 1959; 0924 GCT; 30°29'N, 114°06.5'W; sounding, 82 fm; wind, 120°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°. 7 (103G.25)

2	19.76	35.54	5.72	272	0	(19.76)	(35.54)	(5.72)	(25.26)	(272)	(0.00)
11	19.75	35.54	5.68	272	10	19.75	35.54	5.68	25.26	272	0.03
30	18.16	35.52	5.33	235	20	18.29	35.52	5.37	25.62	238	0.05
49	16.74	35.43	4.27	209	30	18.16	35.52	5.33	25.65	235	0.08
73	15.95	35.39	3.16	194	50	16.73	35.43	4.25	25.93	208	0.12
100	14.92	35.19	1.95	187	75	15.91	35.38	3.14	26.08	194	0.17
131	14.87	35.21	1.86	184	100	14.92	35.19	1.95	26.16	187	0.22

SPENCER F. BAIRD; April 16, 1959; 1129 GCT; 30°21.5'N, 114°21'W; sounding, 48 fm; wind, 110°, force 4; weather, clear; sea, rough; wire angle, 19°. 8 (103G.10)

3	19.88	35.75	5.31	260	0	(19.88)	(35.75)	(5.31)	(25.38)	(260)	(0.00)
12	19.82	35.75	5.32	258	10	19.84	35.75	5.32	25.40	259	0.03
21	17.44	35.61	4.53	212	20	17.70	35.62	4.65	25.84	217	0.05
31	16.73	35.62	4.01	195	30	16.74	35.62	4.01	26.07	195	0.07
49	16.68	35.85r	3.52	-	50	16.67	35.63	3.51	26.09	193	0.11
73	16.60	35.65	3.45	189	75	(16.59)	(35.66)	(3.44)	(26.13)	(189)	(0.16)

a) Bubbles in sample bottle.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m

12 (1156.20) SPENCER F. BAIRD; April 20, 1959; 0834 GCT; 28°42'N, 113°03'W; sounding, 832 fm; wind, calm; weather, clear; sea, calm; wire angle, 04°.

2	19.42	35.37	4.90	277	0	(19.42)	(35.37)	(4.90)	(25.21)	(277)	(0.00)
11	18.64	35.32	3.80	261	10	18.72	35.32	3.90	25.36	263	0.03
32	18.26	35.34a)	3.60	250	20	18.43	35.33	3.67	25.44	255	0.05
56	17.08	35.25	3.08	230	30	18.28	35.34	3.61	25.48	251	0.08
71	16.18	35.21	2.96	212	50	17.36	35.27	3.19	25.66	234	0.13
86	15.46	35.14	2.65	202	75	15.90	35.18	2.87	25.93	208	0.18
99	15.20	35.14	2.68	196	100	15.18	35.14	2.67	26.06	196	0.23
124	14.85	35.10	2.58	192	150	14.69	35.08	2.54	26.12	190	0.33
152	14.66	35.08	2.53	189	200	14.18	35.07	2.28	26.23	180	0.42
175	14.36	35.08	2.44	183	250	13.97	35.06	2.17	26.26	177	0.52
208	14.13	35.07	2.25	179	300	13.45	35.00	1.90	26.32	171	0.60
263	13.90	35.05	2.14	176	400	12.54	34.89	1.45	26.42	162	0.78
361	12.75	34.91	1.53	164	500	12.20	34.87	1.31	26.47	157	0.94
482	12.26	34.87	1.36	158	600	12.01	34.86	1.23	26.49	155	1.11
628	11.98	34.85	1.18	154	700	11.92	34.84	1.23	26.50	154	1.27
821	11.84	34.81	1.32	155	800	11.87	34.82	1.30	26.50	154	1.44
1065	11.66	34.81	1.05	152	1000	11.70	34.81	1.10	26.52	152	1.77
1234	11.58	34.82	0.78	149							

13 (1146.20) SPENCER F. BAIRD; April 20, 1959; 1133 GCT; 28°51'N, 113°10'W; sounding, 457 fm; wind, 310°, force 4; weather, clear; sea, moderate; wire angle, 41°.

2	17.92	35.25	4.94	249	0	(17.92)	(35.25)	(4.94)	(25.50)	(249)	(0.00)
11	17.73	35.25	4.82	244	10	17.76	35.25	4.86	25.54	245	0.02
26	17.21	35.22	4.41	235	20	17.60	35.24	4.73	25.58	242	0.05
40	16.43	35.14	4.01	223	30	17.12	35.21	4.35	25.67	233	0.07
59	15.72	35.14	3.39	208	50	15.94	35.14	3.60	25.89	212	0.12
75	15.56	35.13	3.23	205	75	15.56	35.13	3.23	25.97	205	0.17
89	15.44	35.12	3.22	203	100	15.33	35.13	3.20	26.02	200	0.22
107	15.28	35.14	3.18	198	150	14.99	35.15	3.02	26.11	191	0.32
137	15.08	35.12	3.13	196	200	14.79	35.15	2.89	26.16	187	0.42
165	14.93	35.16	2.98	190	250	14.11	35.09	2.50	26.25	178	0.51
195	14.82	35.15	2.90	188	300	13.36	35.02	2.03	26.36	168	0.60
254	14.03	35.08	2.43	177	400	12.85	34.99	1.84	26.44	160	0.77
316	13.21	35.01	1.91	166	500	12.37	34.93	1.48	26.48	156	0.93
383	12.94	35.00	1.85	161							
452	12.60	34.95	1.60	158							
522b)	12.26	34.92	1.42	155							

15 (1136.18) SPENCER F. BAIRD; April 21, 1959; 0446 GCT; 28°58'N, 113°19'W; sounding, 581 fm; wind, calm; weather, partly cloudy; sea, calm; wire angle, 05°.

1	17.38	35.45	4.72	222	0	(17.38)	(35.45)	(4.72)	(25.79)	(222)	(0.00)
11	16.58	35.34	4.22	212	10	16.65	35.35	4.31	25.88	213	0.02
30	16.68	35.39	4.05	211	20	16.54	35.34	4.08	25.90	211	0.04
55	16.72	35.41	4.03	209	30	16.68	35.39	4.05	25.90	211	0.06
84	16.46	35.38	3.82	206	50	16.72	35.41	4.04	25.91	210	0.11
112	15.40	35.28	2.93	190	75	16.53	35.39	3.87	25.94	207	0.16
141	14.54	35.10	2.75	186	100	15.97	35.33	3.35	26.04	198	0.21
163	14.46	35.16	2.70	180	150	14.50	35.13	2.71	26.20	183	0.30
215	13.92	35.08	2.41	174	200	14.09	35.11	2.52	26.27	176	0.40
260	13.56	35.05	2.07	169	250	13.62	35.06	2.12	26.33	170	0.48
316	13.28	35.01	1.91	167	300	13.35	35.03	1.98	26.35	168	0.57
411	12.87	34.96	1.60	163	400	12.92	34.97	1.66	26.40	164	0.74
513	12.46	34.94	1.42	157	500	12.50	34.94	1.46	26.46	158	0.91
607	11.98	34.90	1.15	151	600	12.01	34.91	1.17	26.52	152	1.07
710	11.78	34.88	1.23	148	700	11.78	34.88	1.22	26.56	148	1.23
819	11.72	34.87	1.32	148	800	11.74	34.87	1.30	26.56	148	1.39
940	11.68	34.85	1.18	149	1000	(11.64)	(34.88)	(0.99)	(26.58)	(146)	(1.71)
990	11.66	34.87	0.99	147							

a) Loose bottle cap; value falls on property curve.
b) Alternate depth of 538 meters rejected.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; April 21, 1959; 0753 GCT; 29°15'N, 113°32'W; sounding, 386 fm; wind, 250°, force 4; weather, partly cloudy; sea, slight; wire angle, 33°. 16 (111G.14)

1	17.30	35.48	4.47	218	0	(17.30)	(35.48)	(4.47)	(25.83)	(218)	(0.00)
10	17.29	35.44	4.41	221	10	17.29	35.44	4.41	25.80	221	0.02
27	17.19	35.47	4.34	216	20	17.26	35.45	4.40	25.82	218	0.04
44	17.04	35.50	4.05	211	30	17.14	35.47	4.31	25.86	215	0.07
65	17.07	35.48	4.00	213	50	17.04	35.50	4.04	25.90	211	0.11
83	17.04	35.46	4.05	213	75	17.06	35.47	4.04	25.88	213	0.16
102	17.04	35.50	3.95	211	100	17.04	35.50	3.95	25.90	211	0.22
118	16.72	35.49	3.79	204	150	15.28	35.24	3.20	26.11	191	0.32
145	15.32	35.26	3.26	190	200	15.26	35.21	3.19	26.09	193	0.41
177	15.26	35.21	3.19	193	250	14.94	35.16	2.98	26.13	189	0.51
207	15.26	35.20	3.18	194	300	14.29	35.09	2.59	26.22	181	0.60
238	15.06	35.17	3.07	191	400	13.11	34.96	1.80	26.36	167	0.78
268	14.72	35.15	2.77	186							
301	14.29	35.09	2.59	181							
335	14.13	35.08	2.49	179							
373	13.30	34.99	1.94	169							
409	13.07	34.96	1.75	167							
448	12.59	34.96	1.48	158							

SPENCER F. BAIRD; April 25, 1959; 0158 GCT; 27°33.5'N, 110°49.5'W; sounding, 396 fm; wind, 140°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°. 18 (127G.90)

2	24.32	35.26	4.24	414	0	(24.32)	(35.26)	(4.24)	(23.77)	(414)	(0.00)
11	24.34	35.21	3.89	419	10	24.33	35.21	3.95	23.72	418	0.04
31	23.72	35.21	3.93	401	20	24.29	35.21	3.89	23.74	417	0.08
40	22.20	35.23	3.39	358	30	23.79	35.21	3.94	23.88	403	0.12
49	20.37	35.35	4.45	301	50	20.26	35.35	4.40	24.98	299	0.19
72	18.92	35.28	3.00	271	75	18.91	35.28	2.99	25.28	270	0.26
95	17.38	35.29	2.68	233	100	17.30	35.28	2.62	25.68	232	0.33
117	15.74	35.10	1.59	211	150	13.90	34.96	0.86	26.20	182	0.43
140	14.55	35.05	1.15	189	200	12.52	34.87	0.29	26.41	163	0.52
164	13.17	34.87	0.51	175	250	11.68	34.81	0.16	26.52	152	0.60
209	12.40	34.87	0.26	161	300	11.01	34.77	0.14	26.61	144	0.68
256	11.56	34.80	0.15	151	400	9.48	34.68	0.08	26.81	125	0.82
325	10.71	34.75	0.12	140	500	8.26	34.62	0.05	26.96	110	0.94
396	9.53	34.68	0.08	126	600	7.07	34.61	0.04	27.12	95	1.05
466	8.68	34.64	0.05	115							
538	7.76	34.61	0.05	104							
610	6.98	34.61	0.04	94							
659	6.64	34.56	0.05	93							

SPENCER F. BAIRD; April 25, 1959; 0448 GCT; 27°23'N, 111°08'W; sounding, 964 fm; wind, 160°, force 3; weather, partly cloudy; sea, moderate; wire angle, 25°. 19 (127G.70)

2	23.52	35.29	4.78	390	0	(23.52)	(35.29)	(4.78)	(24.02)	(390)	(0.00)
11	23.52	35.30	4.81	389	10	23.52	35.30	4.81	24.03	389	0.04
28	20.26	35.27	5.26	304	20	21.40	35.29	5.12	24.62	333	0.07
46	18.86	35.23	4.08	273	30	20.21	35.27	5.25	24.93	303	0.11
67	17.54	35.23	3.51	241	50	18.10	35.23	3.76	25.44	255	0.16
87	16.02	35.09	2.22	218	75	16.95	35.18	3.00	25.68	232	0.22
115	14.58	35.01	1.95	193	100	15.05	35.03	2.02	26.00	202	0.28
146	14.18	35.03	1.88	183	150	14.14	35.03	1.88	26.20	182	0.37
185	13.78	34.99	1.88	178	200	13.60	34.98	1.74	26.27	176	0.47
228	13.24	34.96	1.35	170	250	12.63	34.91	0.86	26.42	162	0.55
276	11.90	34.84	0.47	153	300	11.44	34.80	0.31	26.56	149	0.63
365	10.38	34.70	0.12	138	400	10.01	34.66	0.12	26.70	135	0.78
447a)	9.60	34.61	0.13	132	500	8.62	34.61	0.14	26.90	117	0.91
531	8.05	34.61	0.15	108	600	7.24	34.59	0.13	27.08	99	1.02
636	6.88	34.58	0.11	95	700	6.25	34.60	0.10	27.22	86	1.12
743	5.92	34.61	0.10	80	800	5.58	34.60	0.10	27.32	77	1.21
920	4.98	34.58	0.16	71	1000	4.54	34.59	0.20	27.42	66	1.37
1106	4.05	34.61	0.31	60							

a) Possible pretrip; alternate depth, 387 meters.

SIO

VERMILION SEA

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
21 (109G.10) SPENCER F. BAIRD; April 26, 1959; 1721 GCT; 29°29.5'N, 113°49'W; sounding, 457 fm; wind, calm; weather, overcast; sea, smooth; wire angle, 04°.											
1	19.82	35.82	4.52	254	0	(19.82)	(35.82)	(4.52)	(25.45)	(254)	(0.00)
11	19.64	35.79	4.39	251	10	19.65	35.79	4.40	25.47	252	0.02
35	19.38	35.80	4.22	244	20	19.51	35.79	4.31	25.52	247	0.05
45	19.35	35.80	4.18	243	30	19.41	35.80	4.27	25.54	245	0.07
54	19.33	35.81	4.05	241	50	19.34	35.81	4.07	25.57	242	0.12
68	18.88	35.75	3.89	235	75	18.25	35.68	3.84	25.75	225	0.18
83	17.40	35.61	3.77	210	100	16.53	35.57	3.02	26.08	194	0.24
106	16.50	35.56	3.01	194	150	15.92	35.51	2.82	26.18	185	0.33
129	16.42	35.55	3.06	193	200	15.78	35.45	2.76	26.16	186	0.43
157	15.86	35.50	2.79	184	250	14.19	35.21	2.02	26.33	170	0.52
204	15.77	35.44	2.75	186	300	13.59	35.07	1.63	26.35	168	0.60
250	14.19	35.21	2.02	170	400	12.94	34.97	1.27	26.40	164	0.78
302	13.57	35.07	1.61	168	500	12.52	34.92	1.24	26.44	160	0.94
394	12.98	34.97	1.28	164	600	12.21	34.90	1.11	26.49	155	1.11
489	12.58	34.99u	1.25	-	700	12.12	34.92	1.01	26.52	152	1.27
584	12.24	34.90	1.12	156	800	(12.03)	(34.94)	(0.87)	(26.56)	(148)	(1.44)
680	12.14	34.92	1.02	152							
777	12.06	34.93	0.92	150							
24 (116G.31) SPENCER F. BAIRD; April 29, 1959; 0403 GCT; 28°41.5'N, 112°49'W; sounding, 209 fm; wind, 020°, force 4; weather, clear; sea, slight; wire angle, 06°.											
0	21.95	35.34	4.86	343	0	21.95	35.34	4.86	24.51	343	0.00
10	19.83	35.34	4.31	289	10	19.83	35.34	4.31	25.08	289	0.03
20	19.01	35.28	3.90	273	20	19.01	35.28	3.90	25.25	273	0.06
30	18.68	35.41	3.74	255	30	18.68	35.41	3.74	25.44	255	0.09
49	17.76	35.21	3.46	248	50	17.75	35.21	3.45	25.52	247	0.14
77	17.04	35.17	3.17	234	75	17.07	35.17	3.18	25.65	235	0.20
101	16.80	35.17	3.09	229	100	16.81	35.17	3.09	25.71	230	0.26
125	16.30	35.17	3.03	218	150	15.32	35.19	2.67	26.07	195	0.36
153	15.18	35.19	2.61	192	200	13.86	35.04	2.11	26.26	177	0.46
177	14.18	35.08	2.30	180	250	12.72	34.93	1.59	26.42	162	0.54
201	13.85	35.04	2.10	176	300	11.88	34.89	1.32	26.56	149	0.62
250	12.72	34.93	1.59	162							
303	11.82	34.89	1.31	149							
352	10.32	34.78	1.04	130							
25 (127G.30) SPENCER F. BAIRD; April 29, 1959; 1929 GCT; 27°03'N, 111°48.5'W; sounding, 643 fm; wind, calm; weather, cloudy; sea, smooth; wire angle, 02°.											
2	23.35	35.32	4.86	383	0	(23.35)	(35.32)	(4.86)	(24.10)	(383)	(0.00)
12	22.65	35.37	5.05	360	10	22.88	35.36	5.03	24.26	367	0.04
21	18.98	35.25	4.14	274	20	19.05	35.25	4.18	25.22	276	0.07
51	17.16	35.21	3.35	234	30	17.92	35.23	3.74	25.49	250	0.10
85	15.86	35.07	2.30	216	50	17.20	35.21	3.38	25.65	235	0.14
118	14.66	35.00	1.50	196	75	16.11	35.10	2.52	25.81	219	0.20
147	14.28	35.01	1.93	187	100	15.34	35.04	1.75	25.95	206	0.26
194	13.42	34.94	1.35	175	150	14.22	35.01	1.93	26.16	186	0.35
240	12.61	34.90	0.81	163	200	13.32	34.93	1.27	26.30	173	0.44
287	11.86	34.80	0.58	156	250	12.43	34.89	0.75	26.43	161	0.53
333	11.09	34.77	0.32	145	300	11.63	34.79	0.51	26.52	153	0.61
425	9.06	34.65	0.18	121	400	9.49	34.67	0.19	26.80	126	0.76
518	8.22	34.64	0.16	109	500	8.39	34.64	0.16	26.96	111	0.88
612	7.03	34.60	0.09	96	600	7.19	34.61	0.10	27.10	97	0.99
707	6.04	34.56	0.09	86	700	6.11	34.56	0.09	27.22	86	1.09
802	5.18	34.61	0.18	72	800	5.20	34.61	0.17	27.38	72	1.17
898	4.58	34.59	0.21	67	1000	4.23	34.60	0.27	27.47	62	1.32
1044	4.12	34.61	0.29	60							

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}^{-5}{}_{3}$ 10^{-5} cm/g	ΔD dyn. m	
SPENCER F. BAIRD; April 29, 1959; 2236 GCT; 27°08'N, 111°38'W; sounding, 974 fm; wind, calm; weather, cloudy; sea, calm; wire angle, 02°.												26 (127G.40)
0	23.30	35.40	5.01	376	0	23.30	35.40	5.01	24.17	376	0.00	
10	22.82	35.41	5.08	362	10	22.82	35.41	5.08	24.31	362	0.04	
29	22.32	35.39	5.08	349	20	22.82	35.41	5.08	24.31	362	0.07	
49	19.80	35.26	4.48	293	30	22.20	35.39	5.07	24.47	347	0.11	
73	15.98	35.07	2.70	218	50	19.76	35.26	4.45	25.05	292	0.17	
96	14.97	35.17	2.39	189	75	16.88	35.07	2.67	25.85	216	0.24	
129	14.52	35.08	2.24	187	100	14.92	35.16	2.35	26.14	189	0.29	
166	13.64	34.97	1.83	177	150	14.03	35.02	2.05	26.21	182	0.38	
212	12.67	34.86	0.63	166	200	12.90	34.89	0.84	26.34	169	0.47	
263	11.50	34.78	0.29	151	250	11.77	34.79	0.32	26.49	155	0.55	
318	10.81	34.78	0.22	139	300	11.02	34.78	0.24	26.62	143	0.63	
420	9.10	34.65	0.17	121	400	9.44	34.67	0.18	26.81	125	0.77	
512	7.86	34.60	0.12	106	500	7.98	34.61	0.13	26.99	108	0.89	
606	6.98	34.55	0.11	98	600	7.02	34.55	0.11	27.08	98	1.00	
723	5.85	34.56	0.12	83	700	6.08	34.56	0.12	27.22	86	1.10	
841	4.87	34.54	0.17	74	800	5.17	34.55	0.15	27.32	76	1.19	
1031	4.16	34.59	0.27	62	1000	4.26	34.59	0.24	27.46	64	1.34	
1224	3.52	34.58	0.47	57								
SPENCER F. BAIRD; April 30, 1959; 1159, 0958 GCT; 27°16.5'N, 111°21.5'W; sounding, 1021 fm; wind, 090°, force 3; weather, overcast; sea, calm; wire angle, 06°, 02°.												27 (127G.55)
2	23.22	35.46	4.97	369	0	(23.22)	(35.46)	(4.97)	(24.24)	(369)	(0.00)	
11	23.06	35.46	5.00	365	10	23.12	35.46	4.99	24.27	366	0.04	
20	20.80	35.37	5.29	311	20	20.80	35.37	5.29	24.85	311	0.07	
25	19.14	35.32	4.82	273	30	18.74	35.27	4.36	25.31	267	0.10	
30	18.74	35.27	4.36	267	50	17.25	35.25	3.43	25.67	233	0.15	
48	17.34	35.26	3.49	235	75	16.32	35.16	2.77	25.82	219	0.21	
76	16.31	35.16	2.76	219	100	15.25	35.07	1.80	25.99	203	0.26	
99	15.26	35.07	1.81	203	150	13.76	34.98	1.30	26.24	179	0.36	
128	14.24	35.00	1.45	187	200	12.50	34.87	0.66	26.42	162	0.44	
166	13.38	34.96	1.16	172	250	11.15	34.72	0.19	26.56	149	0.52	
213	12.15	34.83	0.49	159	300	10.56	34.72	0.34	26.66	139	0.60	
261	10.97	34.71	0.18	147	400	8.87	34.64	0.17	26.88	118	0.74	
308	10.48	34.72	0.37	138	500	7.85	34.57	0.11	26.98	109	0.86	
368	9.46	34.69	0.20	124	600	7.10	34.58	0.04	27.09	98	0.97	
433	8.34	34.60	0.14	114	700	6.28	34.58	0.00	27.21	87	1.07	
505	7.76	34.56	0.10	108	800	5.42	34.60	0.05	27.33	75	1.16	
576	7.24	34.59	0.09	99	1000	4.52	34.57	0.13	27.41	68	1.32	
643	6.68	34.57	0.10	93	1200	3.68	34.59	0.27	27.51	58	1.47	
					1500	2.99	34.64	0.62	27.62	48	1.66	
500a)	7.90	34.69u	0.00	-								
591	7.23	34.58	0.00	100								
683	6.44	34.58	0.00	89								
775	5.58	34.61	0.00	76								
867	5.16	34.58	0.14	74								
961	4.70	34.58	0.10	69								
1053	4.28	34.56	0.19	66								
1146	3.81	34.60	0.26	58								
1241	3.59	34.58	0.32	58								
1333	3.34	34.63	0.50	52								
1428	3.12	34.65	0.55	48								
1523	2.98	34.64	0.63	48								
1618	2.94	34.66	0.62	46								
1716	2.92	34.67	0.62	45								
1763	2.92	34.63	0.67	48								

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O_2	$\delta_{T_3}^{-5}$	Z	T	S	O_2	σ_t	$\delta_{T_3}^{-5}$	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
29 (130G.52)	SPENCER F. BAIRD; May 2, 1959; 0148 GCT; 26°49.5'N, 111°08'W; sounding, 961 fm; wind, 190°, force 4; weather, partly cloudy; sea, rough; wire angle, 34°.										
0	24.0	35.19	-	411	0	24.0	35.19		23.80	411	0.00
13	23.94	35.19	4.64	409	10	23.97	35.19		23.81	410	0.04
41	18.60	35.32	4.52	260	20	23.30	35.20	4.62	24.02	390	0.08
65	16.99	35.22	3.19	230	30	21.83	35.24	4.61	24.47	347	0.12
102	15.12	35.05	1.55	202	50	17.99	35.29	4.10	25.52	247	0.18
131	14.24	35.01	1.14	186	75	16.00	35.13	2.24	25.87	214	0.24
161	13.57	34.92	0.72	179	100	15.14	35.05	1.56	26.00	202	0.29
200	12.74	34.87	0.59	167	150	13.79	34.95	0.92	26.21	182	0.38
256	11.60	35.02u	0.22	-	200	12.74	34.87	0.59	26.37	167	0.48
352	9.92	34.67	0.11	132	250	11.71	34.81	0.25	26.51	153	0.56
429	8.68	34.64	0.05	115	300	10.79	34.74	0.16	26.63	142	0.64
525	7.59	34.61	0.00	102	400	9.13	34.65	0.07	26.84	122	0.77
681	5.87	34.54	0.04	85	500	7.83	34.62	0.00	27.02	105	0.90
864	4.97a)	34.57	0.12	72	600	6.66	34.57	0.01	27.14	93	1.00
1032	4.30	34.60	0.22	63	700	5.73	34.54	0.04	27.25	83	1.10
1225	3.58	34.61	0.42	56	800	5.23	34.56	0.09	27.32	76	1.19
1401	3.12	34.63	0.61	50	1000	4.42	34.59	0.20	27.44	65	1.35
1606	2.94	34.63	0.70	48	1200	3.65	34.61	0.41	27.54	56	1.49
1702	2.90	34.64	0.74	47	1500	3.01	34.63	0.67	27.61	49	1.68
30 (138G.70)	SPENCER F. BAIRD; May 3, 1959; 0148 GCT; 25°50'N, 110°08.5'W; sounding, 1057 fm; wind, calm; weather, clear; sea, slight; wire angle, 03°.										
0	23.8	35.03	-	416	0	23.8	35.03		23.74	416	0.00
11	23.44	35.01	4.71	408	10	23.48	35.01		23.82	409	0.04
30	20.48	35.22	4.92	314	20	23.15	35.02	4.74	23.93	399	0.08
56	17.81	35.26	3.82	246	30	20.48	35.22	4.92	24.82	314	0.12
80	16.34	35.14	2.51	221	50	18.02	35.26	4.01	25.48	251	0.17
109	15.10	35.05	2.23	201	75	16.80	35.18	2.91	25.72	228	0.24
138	14.08	34.94	1.19	188	100	15.23	35.06	2.27	25.99	203	0.29
167	13.52	34.94	1.26	177	150	13.81	34.94	1.23	26.20	183	0.39
218	12.89	34.88	0.78	169	200	13.11	34.90	0.96	26.31	172	0.48
312	11.50	34.76	0.23	153	250	12.41	34.84	0.52	26.40	164	0.57
404	10.26	34.67	0.12	138	300	11.65	34.77	0.29	26.49	155	0.65
521	8.48	34.60	0.10	115	400	10.32	34.67	0.12	26.66	139	0.80
707	6.08	34.54	-	88	500	8.81	34.61	0.10	26.87	119	0.94
895	4.68	34.53	0.20	72	600	7.29	34.57	(0.12)	27.06	101	1.06
1108	3.95	34.58	0.37	61	700	6.13	34.54	(0.15)	27.19	88	1.16
1296	3.40	34.60	0.63	55	800	5.34	34.53	(0.17)	27.29	79	1.26
1511	2.92	34.61	1.02	50	1000	4.25	34.55	0.27	27.43	66	1.42
1703	2.62	34.61	1.35	47	1200	3.68	34.59	0.47	27.52	58	1.57
1896	2.46	34.62	1.49	45	1500	2.94	34.61	1.01	27.60	50	1.76

a) Mean value of 4.94 and 5.00°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{10}$ cm^3/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{10}$ cm^3/g	ΔD dyn. m
SPENCER F. BAIRD; May 3, 1959; 2343, 1950 GCT; 24°38'N, 109°08'W; sounding, 1836 fm; wind, 320°, force 2; weather, clear; sea, moderate; wire angle, 25°, 49°.											31 (147G.85)
2	24.46	35.14	4.77	427	0	(24.46)	(35.14)	(4.77)	(23.63)	(427)	(0.00)
11	24.46	35.12	4.83	429	10	24.46	35.12	4.83	23.62	428	0.04
20	24.34	35.12	4.84	425	20	24.34	35.12	4.84	23.65	425	0.09
33	22.37	35.14	5.04	369	30	23.45	35.14	5.04	24.21	371	0.12
54	20.96	35.23	4.71	326	50	21.01	35.23	4.76	24.68	327	0.20
78	20.45	35.21	4.17	314	75	20.77	35.22	4.52	24.75	321	0.28
90	20.14	35.26	4.12	302	100	19.74	35.23	3.79	25.03	294	0.36
100	19.74	35.23	3.79	294	150	14.52	34.88	0.72	26.01	201	0.48
115	18.11	35.14	2.70	261	200	12.52	34.81	0.20	26.36	167	0.58
139	15.64	34.96	1.26	219	250	11.72	34.79	0.14	26.50	154	0.66
182	12.97	34.81	0.26	176	300	10.97	34.75	0.12	26.61	144	0.74
222	12.13	34.81	0.17	160	400	9.44	34.64	0.10	26.79	127	0.88
269	11.43	34.78	0.12	150	500	8.13	34.59	0.10	26.96	111	1.01
355	10.12	34.69	0.11	134	600	7.03	34.57	0.10	27.09	98	1.12
447	8.78	34.60	0.10	120	700	6.06	34.55	0.09	27.20	87	1.22
541	7.68	34.59	0.10	105	800	5.30	34.54	0.12	27.29	79	1.32
648	6.52	34.55	0.10	92	1000	4.14	34.55	0.26	27.43	66	1.48
805	5.20	34.55	0.17	77	1200	3.66	34.59	0.45	27.52	58	1.62
					1500	2.88	34.59	1.00	27.60	50	1.82
768a)	5.61	34.51	0.09	84	2000	2.20	34.61	1.69	27.67	43	2.10
837	5.14	34.53	0.10	77	2500	1.91	34.69		27.75	36	
982	4.20	34.54	0.25	67							
1125	3.87b)	34.58	0.36	61							
1274	3.46	34.59	0.60	56							
1426	3.10	34.58	0.80	53							
1581	2.66	34.61	1.22	47							
1740	2.54	34.76r	1.33	-							
1908	2.39	34.61	1.52	45							
2078	2.06	34.62	1.84	42							
2254	1.96	34.65	2.02	39							
2432	1.92	34.69	2.12	35							
2613	1.90	34.68	-	36							
2707	1.90	34.69	-	35							
SPENCER F. BAIRD; May 4, 1959; 1156 GCT; 23°53'N, 109°02'W; sounding, 1331 fm; wind, 340°, force 5; weather, clear; sea, rough; wire angle, 43°.											32 (151G.67)
1	25.30	34.98	4.48	463	0	(25.30)	(34.98)	(4.48)	(23.26)	(463)	(0.00)
9	25.33	35.01	4.54	461	10	25.32	35.01	4.55	23.28	461	0.05
23	24.64	34.99	4.70	443	20	24.69	34.99	4.70	23.45	444	0.09
38	21.48	35.00	4.64	356	30	23.40	34.99	4.70	23.83	408	0.13
56	18.62	34.88	2.42	293	50	19.42	34.91	3.12	24.86	310	0.21
73	17.05	34.88	1.23	256	75	17.04	34.88	1.22	25.42	256	0.28
99	15.74	34.88	0.97	227	100	15.73	34.88	0.98	25.73	227	0.34
123	14.67	34.90	0.77	203	150	13.43	34.82	0.27	26.18	184	0.44
152	13.37	34.81	0.25	183	200	12.20	34.79	0.15	26.41	163	0.53
184	12.53	34.77	0.15	171	250	11.34	34.76	0.15	26.55	150	0.61
219	11.85	34.80	0.16	156	300	10.49	34.68	0.12	26.64	140	0.69
288	10.71	34.70	0.13	143	400	8.76	34.61	0.12	26.87	119	0.82
351	9.46	34.62	0.06	129	500	7.49	34.57	0.14	27.03	104	0.94
418	8.52	34.60	0.13	116	600	6.62	34.51	0.17	27.10	97	1.04
503	7.46	34.57	0.14	104	700	5.99	34.51	0.18	27.19	88	1.14
591	6.68	34.51	0.17	98	800	5.43	34.53	0.21	27.28	80	1.23
743	5.75	34.52	0.19	85	1000	(4.22)	(34.59)		(27.46)	(63)	(1.39)
905	4.82	34.56	0.25	72							

a) Overlapping casts; reconciliation of property curves when necessary.
b) Mean value of 3.84 and 3.90°C.

34 (151G.41) SPENCER F. BAIRD; May 4, 1959; 0815 GCT; 23°40'N, 109°24.5'W; sounding, 325 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 36°.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta_{T}{}^{-5}_{10}{}^{3}$ cm/g	ΔD dyn. m
1	24.72	35.06	4.57	440	0	(24.72)	(35.06)	(4.57)	(23.49)	(440)	(0.00)
21	24.73	35.07	4.59	440	10	24.73	35.07	4.58	23.50	440	0.04
39	20.79	34.93	3.01	343	20	24.73	35.07	4.58	23.50	440	0.09
57	18.83	35.10	2.84	282	30	24.73	35.07	4.59	23.50	440	0.13
73	17.02	34.97	1.76	249	50	19.27	35.07	2.88	25.02	294	0.20
90	15.54	34.90	0.90	221	75	16.70	34.92	1.63	25.54	245	0.27
107	14.98	34.96	0.99	205	100	15.21	34.94	0.96	25.90	211	0.33
141	13.66	34.87	0.45	185	150	13.42	34.86	0.38	26.22	181	0.43
215	12.15	34.78	0.16	163	200	12.41	34.80	0.18	26.36	167	0.52
292	10.74	34.70	0.11	144	250	11.50	34.74	0.12	26.50	154	0.60
372	9.64	34.63	0.09	131	300	10.63	34.69	0.10	26.62	143	0.68
455	8.15	34.63	0.04	108	400	9.17	34.63	0.07	26.82	124	0.82

35 (151G.52) SPENCER F. BAIRD; May 5, 1959; 1109 GCT; 23°47.5'N, 109°13.5'W; sounding, 1233 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 33°.

1	24.78	34.99	4.74	447	0	(24.78)	(34.99)	(4.74)	(23.42)	(447)	(0.00)
10	24.80	35.01	4.71	446	10	24.80	35.01	4.71	23.43	446	0.04
26	22.54	34.94	4.88	338	20	24.78	35.01	4.70	23.44	445	0.09
48	19.50	34.92	3.25	311	30	22.25	34.94	4.83	24.12	381	0.13
67	18.04	34.91	2.05	277	50	19.42	34.92	3.18	24.87	309	0.20
91	16.46	34.92	1.59	240	75	17.40	34.91	1.82	25.38	261	0.27
112	15.19	34.88	0.93	215	100	15.81	34.90	1.26	25.73	227	0.33
137	13.95	34.84	0.63	193	150	13.53	34.84	0.53	26.18	184	0.44
179	12.81	34.83	0.38	171	200	12.32	34.80	0.27	26.39	165	0.53
222	11.84	34.76	0.18	158	250	11.36	34.74	0.16	26.53	152	0.61
275	10.98	34.72	0.16	146	300	10.56	34.69	0.15	26.64	141	0.68
362	9.52	34.61	0.11	131	400	9.02	34.59	0.12	26.81	125	0.82
457	8.37a)	34.58	0.16	115	500	7.86	34.57	0.17	26.98	109	0.94
535	7.48	34.56	0.18	105	600	6.88	34.52	0.16	27.08	99	1.06
616	6.74	34.51	0.16	98	700	6.03	34.50	0.14	27.18	90	1.16
777	5.38	34.50	0.17	82	800	5.21	34.50	0.17	27.28	80	1.25
988	4.20	34.58	0.36	64	1000	4.15	34.58	0.38	27.46	63	1.40
1208	3.42	34.58	0.77	56							

a) Mean value of 8.34 and 8.40°C.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	
SPENCER F. BAIRD; May 5, 1959; 1807, 2105 GCT; 24°04'N, 108°52.5'W; sounding, 1630 fm; wind, 350°, force 6; weather, clear; sea, very rough; wire angle, 27°, 41°.												36 (151G.81)
2	24.52	34.99	4.70	440	0	(24.52)	(34.99)	(4.70)	(23.50)	(440)	(0.00)	
11	24.53	35.05	4.71	436	10	24.53	35.05	4.71	23.54	436	0.04	
19	24.52	35.06	4.70	434	20	24.52	35.06	4.70	23.56	434	0.09	
33	21.34	34.83	3.88	364	30	21.85	34.86	4.02	24.17	376	0.13	
54	18.98	34.94	2.71	297	50	19.69	34.91	3.10	24.80	316	0.20	
79	16.30	34.83	1.07	243	75	16.58	34.84	1.24	25.51	248	0.27	
102	14.91	34.88	0.64	209	100	14.97	34.88	0.64	25.91	210	0.33	
124	14.06	34.83	0.45	196	150	13.27	34.81	0.22	26.21	182	0.43	
146	13.36	34.81	0.21	183	200	12.46	34.78	0.08	26.34	169	0.52	
173	12.91	34.81	0.32	175	250	11.82	34.75	0.10	26.45	159	0.60	
201	12.44	34.78	0.08	169	300	10.95	34.71	0.11	26.58	146	0.68	
239	11.98	34.76	0.10	161	400	9.12	34.60	0.11	26.81	125	0.82	
297	11.02	34.72	0.11	148	500	7.76	34.55	0.14	26.98	109	0.95	
377	9.48	34.61	0.10	130	600	6.66	34.54	0.11	27.11	95	1.06	
460	8.23	34.56	0.14	115	700	5.87	34.55	0.10	27.24	84	1.16	
564	7.00	34.54	0.11	100	800	5.22	34.55	0.17	27.32	77	1.25	
693	5.90	34.56	0.10	84	1000	4.32	34.56	0.30	27.43	66	1.41	
827	5.06	34.54	0.20	76	1200	3.68	34.61	0.62	27.53	57	1.55	
					1500	2.88	34.64	1.14	27.63	47	1.74	
453a)	8.48	34.61	0.36u	115	2000	2.17	34.63	1.88	27.68	42	2.01	
602	6.60	34.52	0.11	96	2500	1.90	34.64	2.27	27.72	39		
752	5.58	34.54	0.16	81								
901	4.74	34.58	0.25	69								
1053	4.12	34.57	0.36	64								
1205	3.66	34.61	0.62	57								
1358	3.22	34.61	0.88	52								
1514	2.87	34.64	1.14	47								
1672	2.57	34.63	1.41	45								
1834	2.38	34.64	1.66	43								
1997	2.18	34.63	1.87	42								
2165	2.04	34.67	2.03	38								
2335	1.94	34.66	2.21	38								
2512	1.90	34.64	2.27	39								
2602	1.90	34.63	2.24	40								
SPENCER F. BAIRD; May 6, 1959; 0642 GCT; 24°10'N, 108°30'W; sounding, 781 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 22°.												37 (151G.100)
2	23.89	35.06	4.61	417	0	(23.89)	(35.06)	(4.61)	(23.74)	(417)	(0.00)	
12	23.92	35.07	4.57	416	10	23.92	35.07	4.57	23.75	416	0.04	
30	22.48	34.95	4.47	386	20	23.93	35.07	4.57	23.75	416	0.08	
54	19.38	35.05	2.97	298	30	22.48	34.95	4.47	24.06	386	0.12	
76	17.50	34.98	1.90	259	50	19.68	35.05	3.14	24.90	306	0.19	
102	15.62	34.81	0.85	230	75	17.52	34.98	1.93	25.39	259	0.26	
127	13.85	34.77	0.13	196	100	15.64	34.81	0.86	25.70	230	0.33	
153	13.26	34.78	0.09	184	150	13.32	34.78	0.09	26.18	185	0.43	
196	12.52	34.76	0.12	171	200	12.44	34.76	0.12	26.33	170	0.52	
242	11.66	34.74	0.04	157	250	11.52	34.74	0.02	26.49	155	0.60	
297	10.85	34.70	0.00	146	300	10.79	34.70	0.00	26.60	145	0.68	
387	9.44	34.61	0.06	130	400	9.24	34.60	0.06	26.78	127	0.82	
486	8.10	34.54	0.05	114	500	7.92	34.53	0.05	26.94	112	0.95	
588	6.94	34.51	0.05	101	600	6.81	34.51	0.05	27.08	99	1.06	
692	5.92	34.51	0.08	88	700	5.84	34.51	0.09	27.20	87	1.16	
801	5.19	34.49	0.16	81	800	5.20	34.49	0.16	27.27	81	1.25	
913	4.64	34.52	0.21	73	1000	4.29	34.54	0.31	27.41	68	1.41	
1143	3.78	34.55	0.47	62								

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
38 (151G.115)	SPENCER F. BAIRD; May 6, 1959; 0916 GCT; 24°17.5'N, 108°16'W; sounding, 660 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 23°.										
3	23.83	35.05	4.77	416	0	(23.83)	(35.05)	(4.77)	(23.75)	(416)	(0.00)
12	23.83	35.05	4.76	416	10	23.83	35.05	4.76	23.75	416	0.04
30	23.78	35.03	4.77	416	20	23.82	35.04	4.77	23.75	416	0.08
52	19.07	35.01	2.97	294	30	23.78	35.03	4.77	23.75	416	0.12
72	17.64	34.99	2.08	262	50	19.23	35.01	3.05	24.99	298	0.20
95	15.80	34.87	1.14	229	75	17.30	34.97	1.86	25.44	254	0.26
116	14.40	34.81	0.49	204	100	15.30	34.85	0.92	25.81	220	0.33
139	13.60	34.74	0.15	193	150	13.32	34.75	0.08	26.16	187	0.43
162	12.98	34.77	0.05	179	200	12.39	34.76	0.07	26.35	168	0.52
190	12.52	34.76	0.07	171	250	11.62	34.78	0.04	26.51	153	0.60
238	11.79	34.79	0.05	156	300	10.94	34.73	0.01	26.60	145	0.68
287	11.12	34.74	0.00	148	400	9.41	34.65	0.11	26.80	126	0.82
377	9.78	34.67	0.11	130	500	7.74	34.59	0.11	27.01	106	0.94
478	8.07	34.60	0.11	110	600	6.60	34.55	0.11	27.14	93	1.04
581	6.80	34.56	0.11	95	700	5.62	34.51	0.14	27.23	84	1.14
686	5.72	34.51	0.13	86	800	5.03	34.53	0.20	27.32	76	1.23
848	4.85	34.54	0.23	74	1000	4.29	34.54	0.29	27.41	68	1.38
1036	4.16	34.54	0.31	66							
42 (151G.115)	SPENCER F. BAIRD; May 11, 1959; 1045 GCT; 24°21'N, 108°18'W; sounding, 477 fm; wind, calm; weather, clear; sea, smooth; wire angle, 00°.										
1	24.94	35.12	4.10	442	0	(24.94)	(35.12)	(4.10)	(23.47)	(442)	(0.00)
11	24.54	35.12	3.91	431	10	24.60	35.12	3.93	23.57	433	0.04
20	24.29	35.07	3.92	427	20	24.29	35.07	3.92	23.63	427	0.09
35	21.56	35.02	4.05	356	30	23.02	35.03	3.99	23.98	394	0.13
50	18.96	35.05	2.42	288	50	18.96	35.05	2.42	25.09	288	0.20
73	17.19	34.95	1.24	254	75	17.12	34.95	1.20	25.47	252	0.26
96	15.32	34.90	0.51	216	100	15.08	34.90	0.44	25.89	212	0.32
123	13.94	34.89	0.17	189	150	13.31	34.86	0.00	26.24	178	0.42
151	13.28	34.86	0.00	178	200	12.20	34.79	0.00	26.41	163	0.51
197	12.25	34.79	0.00	164	250	11.59	34.74	0.00	26.48	156	0.59
248	11.61	34.74	0.00	156	300	10.69	34.70	0.00	26.62	143	0.67
298	10.73	34.70	0.00	144	400	9.22	34.63	0.00	26.81	125	0.80
350	9.94	34.90r	0.00	-	500	7.90	34.55	0.00	26.96	111	0.93
397	9.26	34.63	0.00	125	600	6.73	34.53	0.00	27.11	96	1.04
497	7.94	34.55	0.00	111	700	5.73	34.55	0.00	27.25	83	1.13
601	6.72	34.53	0.00	96	800	5.09	34.55	0.14	27.32	76	1.22
707	5.67	34.55	0.00	82							
804	5.08	34.55	0.14	76							
43 (151G.129)	SPENCER F. BAIRD; May 12, 1959; 1247 GCT; 24°25'N, 108°03.5'W; sounding, 26 fm; wind, 220°, force 1; weather, partly cloudy; sea, smooth; wire angle, 00°.										
2	24.88	35.08	4.53	443	0	(24.88)	(35.08)	(4.53)	(23.46)	(443)	(0.00)
12	24.84	35.10	4.50	441	10	24.85	35.10	4.51	23.49	441	0.04
21	21.78	34.98	4.25	365	20	22.00	34.98	4.29	24.23	370	0.08
31	19.90	34.99	3.14	316	30	19.91	34.99	3.15	24.80	316	0.12
41	18.40	34.88	1.83	287							

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm/g	ΔD dyn. m

46
(1596.30)

SPENCER F. BAIRD; May 14-15, 1959; 0222, 2347 GCT; 22°58'N, 108°00'W; sounding, 1567 fm; wind, calm; weather, clear; sea, smooth; wire angle, 07°, 07°.

2	24.60	34.70	4.81	463	0	(24.60)	(34.70)	(4.81)	(23.26)	(463)	(0.00)
12	23.11	34.67	4.97	423	10	23.30	34.67	4.94	23.62	428	0.04
30	21.50	34.63	5.01	383	20	22.48	34.66	5.00	23.84	407	0.09
49	18.42	34.34	4.34	327	30	21.50	34.63	5.01	24.10	383	0.13
68	16.76	34.52	1.46	276	50	18.37	34.34	4.31	24.70	325	0.20
86	15.25	34.58	0.73	238	75	16.10	34.55	1.06	25.40	258	0.27
105	14.56	34.70	0.47	216	100	14.69	34.69	0.51	25.82	219	0.33
128	13.52	34.70	0.23	194	150	12.98	34.74	0.32	26.22	181	0.43
154	12.86	34.74	0.32	179	200	11.81	34.72	0.19	26.43	161	0.52
182	12.17	34.72	0.28	168	250	11.10	34.71	0.12	26.55	150	0.60
215	11.59	34.72	0.14	157	300	10.35	34.66	0.10	26.65	140	0.68
269	10.82	34.69	0.11	146	400	8.64	34.55	0.12	26.84	122	0.81
342	9.66	34.61	0.09	133	500	7.62	34.57	0.10	27.02	105	0.94
417	8.40	34.54	0.12	119	600	6.52	34.50	0.08	27.12	96	1.04
511	7.51	34.57	0.10	104	700	5.77	34.50	0.06	27.20	88	1.14
606	6.39	34.50	0.11	94	800	5.19	34.50	0.05	27.27	81	1.24
701	5.78	34.50	0.11	87	1000	4.32	34.52	0.06	27.39	70	1.41
798	5.20	34.52	0.14	79	1200	3.68	34.55	0.30	27.48	61	1.56
					1500	3.00	34.58	0.86	27.58	52	1.76
611a)	6.52	34.49	0.00	96	2000	2.19	34.61	1.78	27.67	43	2.05
745	5.48	34.49	0.00	84	2500	1.84	34.64	2.27	27.72	39	
883	4.78	34.49	0.00	76							
1020	4.26	34.52	0.09	69							
1156	3.80	34.54	0.25	63							
1294	3.46	34.57	0.46	57							
1434	3.13	34.57	0.73	54							
1573	2.84	34.60	1.00	50							
1713	2.58	34.59	1.29	48							
1855	2.38	34.61	1.56	45							
1995	2.20	34.61	1.78	43							
2138	2.08	34.63	1.95	41							
2281	1.96	34.63	2.12	40							
2424	1.88	34.63	2.23	40							
2570	1.83	34.64	2.29	39							
2715	1.84	34.62	2.32	40							
2765	1.84	34.63	2.34	39							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
47 (162G.25)	SPENCER F. BAIRD; May 15-16, 1959; 0032, 2205 GCT; 21°57.5'N, 107°35'W; sounding, 1661 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 25°, 31°.										
2	26.36	34.81	4.69	506	0	(26.36)	(34.81)	(4.69)	(22.80)	(506)	(0.00)
10	26.18	34.81	4.72	501	10	26.18	34.81	4.72	22.86	501	0.05
28	25.28	34.79	4.84	476	20	25.72	34.80	4.82	22.99	488	0.10
44	22.00	34.70	4.07	391	30	25.05	34.78	4.84	23.18	470	0.15
52	19.68	34.58	0.84	340	50	20.05	34.59	1.28	24.45	349	0.23
59	18.92	34.66	1.46	316	75	16.22	34.69	0.28	25.48	251	0.31
69	17.02	34.67	0.34	271	100	14.38	34.81	0.07	25.98	204	0.36
80	15.68	34.72	0.23	238	150	12.79	34.78	0.10	26.29	174	0.46
107	14.10	34.81	0.06	198	200	12.02	34.79	0.10	26.44	160	0.54
129	13.34	34.76	0.15	187	250	11.51	34.77	0.10	26.52	152	0.63
160	12.58	34.79	0.09	170	300	10.94	34.73	0.09	26.60	145	0.70
215	11.87	34.78	0.11	157	400	9.30	34.66	0.10	26.83	123	0.84
300	10.94	34.73	0.09	145	500	7.95	34.58	0.09	26.98	109	0.97
406	9.21	34.66	0.10	122	600	6.80	34.55	0.09	27.11	96	1.08
538	7.48	34.56	0.09	105	700	5.95	34.55	0.10	27.23	85	1.18
716	5.83	34.55	0.11	84	800	5.39	34.54	0.11	27.29	79	1.27
947	4.64	34.53	0.21	72	1000	4.46	34.52	0.11	27.38	71	1.44
					1200	3.76	34.57	0.46	27.49	60	1.59
838a)	5.22	34.51	0.12	80	1500	2.97	34.61	0.97	27.60	50	1.79
1003	4.44	34.52	0.11	71	2000	2.14	34.64	1.87	27.70	41	2.07
1168	3.84	34.56	0.40	62	2500	1.84	34.63	2.29	27.71	39	
1336	3.34	34.59	0.76	55	3000	1.86	34.65		27.72	38	
1507	2.96	34.61	0.99	50							
1682	2.60	34.62	1.31	45							
1859	2.34	34.63	1.62	43							
2034	2.10	34.64	1.92	40							
2212	1.94	34.65	2.10	39							
2393	1.86	34.64	2.27	39							
2575	1.83	34.63	2.31	40							
2759	1.82	34.65	2.30	38							
2944	1.85	34.63	2.35	40							
3036	1.86	34.65b)	-	38							

a) Overlapping casts; reconciliation of property curves when necessary.
b) Some silt in Nansen bottle.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	
SPENCER F. BAIRD; May 17, 1959; 0727, 0357 GCT; 20°49'N, 106°22'W; sounding, 2429 fm; wind, 320°, force 2; weather, clear; sea, smooth; wire angle, 15°, 28°.												50 (170G.32)
2	28.14	34.65	4.67	573	0	(28.14)	(34.65)	(4.67)	(22.10)	(573)	(0.00)	
11	27.38	34.70	4.63	546	10	27.42	34.70	4.64	22.38	547	0.06	
30	21.46	34.69	3.03	378	20	23.05	34.69	3.57	23.70	420	0.10	
53	18.42	34.64	0.42	305	30	21.46	34.69	3.03	24.14	378	0.14	
81	15.60	34.76	0.10	233	50	18.90	34.64	0.79	24.80	316	0.21	
103	14.50	34.78	0.04	208	75	16.00	34.74	0.13	25.57	242	0.28	
129	13.37	34.78	0.10	186	100	14.57	34.78	0.04	25.91	210	0.34	
155	12.87	34.79	0.05	176	150	12.97	34.79	0.06	26.26	177	0.44	
203	12.16	34.78	0.08	163	200	12.19	34.78	0.07	26.40	163	0.52	
251	11.48	34.72	0.13	155	250	11.48	34.72	0.13	26.49	155	0.61	
300	10.90	34.72	0.00	145	300	10.90	34.72	0.00	26.60	145	0.69	
392	9.38	34.61	0.09	128	400	9.23	34.60	0.10	26.79	127	0.83	
489	7.96	34.56	0.10	111	500	7.83	34.56	0.10	26.97	110	0.96	
587	6.92	34.53	0.12	99	600	6.81	34.53	0.12	27.09	98	1.07	
686	6.12	34.52	0.10	90	700	6.03	34.52	0.10	27.19	88	1.17	
786	5.46	34.52	0.13	82	800	5.36	34.52	0.14	27.28	81	1.26	
987	4.42	34.54	0.26	69	1000	4.37	34.54	0.27	27.40	68	1.43	
1223	3.64	34.57	0.58	59	1200	3.75	34.58	0.47	27.50	59	1.58	
					1500	3.07	34.62	0.93	27.60	50	1.78	
1237a)	3.72	34.60	0.45	58	2000	2.17	34.64	1.90	27.70	41	2.06	
1399	3.25	34.60	0.77	53	2500	1.84	34.65	2.36				
1564	2.94	34.63	1.04	48	3000	1.84	34.68	2.42				
1730	2.59	34.62	1.41	46	4000	1.94	34.65	2.45				
1898	2.33	34.64	1.72	43								
2068	2.08	34.64	2.00	40								
2239	1.98	34.67	2.16	38								
2413	1.88	34.65	2.31	38								
2589	1.83	34.65	2.37	38								
2765	1.84	34.67	2.38	37								
2943	1.83	34.68	2.42	36								
3120	1.85	34.67	2.40	37								
3300	1.88	34.67	2.45	37								
3483	1.89	34.65	2.39	38								
3666	1.91	34.67	2.47	37								
3851	1.94	34.67	2.45	37								
4036	1.94	34.65	2.45	39								
4221	1.98	34.65	2.43	39								
SPENCER F. BAIRD; May 18, 1959; 0235 GCT; 21°04'N, 106°04'W; sounding, 122 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 08°.												51 (170G.38)
2b)	28.41	34.76	4.43	574	0	(28.41)	(34.76)	(4.43)	(22.10)	(574)	(0.00)	
12	28.20	34.75	4.43	568	10	28.32	34.76	4.43	22.13	570	0.06	
21	23.41	34.62	3.96	435	20	23.80	34.63	4.04	23.44	445	0.11	
31	20.31	34.58	1.09	356	30	20.38	34.58	1.16	24.36	357	0.15	
50	17.06	34.67	0.14	272	50	17.06	34.67	0.14	25.26	272	0.21	
74	15.36	34.72	0.00	230	75	15.35	34.72	0.00	25.70	230	0.27	
97	14.73	34.78	0.00	213	100	14.53	34.80	0.00	25.94	207	0.33	
119	14.16	34.83	0.00	198	150	13.57	34.81	0.00	26.15	187	0.43	
156	13.43	34.81	0.00	185	200	(12.51)	(34.81)	(0.17)	(26.36)	(167)	(0.52)	
192	12.69	34.81	0.13	170								

a) Overlapping casts; reconciliation of property curves when necessary.
b) Possible pretrip; depths may be slightly in error.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
52 (1706.43) SPENCER F. BAIRD; May 18, 1959; 0458 GCT; 21°14'N, 105°46'W; sounding, 246 fm; wind, 020°, force 1; weather, clear; sea, slight; wire angle, 05°.											
1	27.20	34.92	4.55	524	0	(27.20)	(34.92)	(4.55)	(22.61)	(524)	(0.00)
11	27.18	34.90	4.56	525	10	27.19	34.90	4.56	22.60	525	0.05
20	25.76	34.81	4.84	489	20	25.76	34.81	4.84	22.98	489	0.10
29	24.66	34.78	4.88	459	30	24.60	34.78	4.86	23.31	457	0.15
48	19.74	34.65	1.32	336	50	19.40	34.65	1.18	24.67	328	0.23
71	16.67	34.67	0.33	263	75	16.48	34.68	0.28	25.42	257	0.30
93	15.66	34.73	0.10	236	100	15.29	34.75	0.11	25.74	226	0.36
117	14.45	34.79	0.14	207	150	13.23	34.81	0.08	26.22	181	0.47
154	13.13	34.81	0.08	179	200	12.38	34.81	0.10	26.39	165	0.55
191	12.49	34.81	0.11	167	250	11.77	34.79	0.02	26.49	155	0.64
238	11.92	34.80	0.00	157	300	10.99	34.74	0.14	26.60	145	0.71
285	11.22	34.76	0.14	148	400	9.23	34.63	0.09	26.81	125	0.85
346	10.23	34.69	0.12	136							
413	8.96	34.61	0.06	122							
53 (1706.48) SPENCER F. BAIRD; May 18, 1959; 0724 GCT; 21°24'N, 105°28'W; sounding, 27 fm; wind, calm; weather, clear; sea, smooth; wire angle, 00°.											
1	27.43	34.86	4.84	536	0	(27.43)	(34.86)	(4.84)	(22.49)	(536)	(0.00)
10	26.80	34.90	5.16	513	10	26.80	34.90	5.16	22.73	513	0.05
20	23.52	34.79	4.47	426	20	23.52	34.79	4.47	23.64	426	0.10
30	20.62	34.67	1.29	357	30	20.62	34.67	1.29	24.37	357	0.14
44	18.96	34.63	0.22	319							
54 (1606.35) SPENCER F. BAIRD; May 18, 1959; 2113 GCT; 22°06'N, 106°29'W; sounding, 399 fm; wind, 030°, force 1; weather, clear; sea, moderate; wire angle, 02°.											
2	27.16	35.03	3.96	515	0	(27.16)	(35.03)	(3.96)	(22.71)	(515)	(0.00)
12	26.33	34.98	4.72	494	10	26.40	34.98	4.71	22.92	495	0.05
21	25.70	34.96	4.72	476	20	25.73	34.96	4.72	23.11	477	0.10
35	22.56	34.85	5.01	395	30	23.75	34.90	4.95	23.66	424	0.14
49	20.86	34.70	4.36	361	50	20.84	34.70	4.35	24.32	361	0.22
63	19.58	34.88	2.34	316	75	17.16	34.76	0.87	25.31	267	0.30
76	17.14	34.76	0.86	266	100	15.07	34.78	0.41	25.81	220	0.36
95	15.26	34.74	0.21a)	227	150	13.26	34.78	0.26	26.19	184	0.47
113	14.86	34.85	0.76a)	211	200	12.34	34.79	0.09	26.38	166	0.56
136	13.70	34.79	-	191	250	11.49	34.74	0.09	26.50	154	0.64
163	12.96	34.78	0.11	178	300	10.83	34.70	0.10	26.60	145	0.72
192	12.49	34.79	0.09	168	400	9.29	34.61	0.07	26.79	127	0.86
251	11.48b)	34.74	0.09	154	500	7.66	34.56	0.05	27.00	107	0.98
335	10.34	34.67	0.11	139	600	6.50	34.54	0.06	27.14	93	1.08
419	8.98	34.60	0.05	123	700	5.81	34.51	0.09	27.21	87	1.18
514	7.44	34.56	0.05	104							
610	6.40	34.54	0.06	92							
707	5.78	34.51	0.10	86							

a) Sample bottles may have been reversed at these levels.
b) Mean value of 11.45 and 11.51°C.

OBSERVED					INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m	
SPENCER F. BAIRD; May 20, 1959; 1208, 1258 GCT; 20°31.5'N, 105°32.5'W; sounding, 730 fm; wind, 090°, force 1; weather, cloudy; sea, smooth; wire angle, 02°, 02°.												56 (174G.40)
2	26.94	34.58	4.60	541	0	(26.94)	(34.58)	(4.60)	(22.44)	(541)	(0.00)	
12	24.52	34.57	4.44	470	10	25.25	34.57	4.55	22.96	491	0.05	
21	20.88	34.58	1.03	370	20	20.90	34.58	1.05	24.22	371	0.09	
31	20.54	34.59	0.89	361	30	20.56	34.59	0.90	24.32	361	0.13	
50	19.06	34.62	0.22	322	50	19.06	34.62	0.22	24.74	322	0.20	
75	16.52	34.70	0.00	257	75	16.52	34.70	0.00	25.42	257	0.27	
102	14.99	34.78	0.00	218	100	15.06	34.78	0.00	25.80	220	0.33	
124	14.16	34.76	0.00	203	150	13.72	34.79	0.00	26.10	192	0.44	
148	13.75	34.79	0.00	193	200	12.89	34.80	0.00	26.28	175	0.53	
198	12.92	34.80	0.00	176	250	12.15	34.75	0.00	26.39	165	0.62	
249	12.16	34.75	0.00	165	300	11.41	34.70	0.00	26.48	156	0.70	
295	11.50	34.70	0.00	157	400	9.56	34.60	0.00	26.74	132	0.85	
392	9.69	34.61	0.00	133	500	8.11	34.57	0.00	26.94	112	0.98	
					600	6.71	34.52	0.08	27.10	97	1.09	
520	7.84	34.56	0.00	109	700	5.99	34.54	0.09	27.21	86	1.19	
611	6.60	34.52	0.09	96	800	5.20	34.51	0.14	27.28	80	1.28	
703	5.97	34.54	0.09	86	1000	4.48	34.56	0.26	27.41	68	1.44	
798	5.22	34.51	0.14	80								
892	4.88	34.56	0.16	73								
987	4.54	34.56	0.25	69								
1130	4.04	34.58	0.42	62								
SPENCER F. BAIRD; May 20, 1959; 1406 GCT; 20°39'N, 105°29'W; sounding, 57 fm; wind, 100°, force 2; weather, overcast; sea, smooth; wire angle, 06°.												57 (174G.42)
2	26.44	34.50	4.77	532	0	(26.44)	(34.50)	(4.77)	(22.54)	(532)	(0.00)	
12	25.04	34.55	4.48	487	10	25.45	34.54	4.58	22.88	499	0.05	
21	21.80	34.56	2.35	396	20	21.90	34.56	2.41	23.93	398	0.10	
31	20.99	34.60	1.68	372	30	21.03	34.60	1.70	24.20	373	0.13	
50	19.36	34.59	0.53	332	50	19.36	34.59	0.53	24.63	332	0.20	
73	17.32	34.63	0.19	280	75	17.25	34.63	0.18	25.20	278	0.28	
96	16.02	34.72	0.09	245	100	(15.88)	(34.73)	(0.08)	(25.58)	(241)	(0.35)	
SPENCER F. BAIRD; May 20, 1959; 1535 GCT; 20°36'N, 105°18.5'W; sounding, 193 fm; wind, 020°, force 2; weather, overcast; sea, smooth; wire angle, 00°.												58 (174G.44)
1	26.55	34.38	4.78	543	0	(26.55)	(34.38)	(4.78)	(22.42)	(543)	(0.00)	
11	23.65	34.58	3.52	445	10	23.80	34.57	3.63	23.40	449	0.05	
31	21.70	34.60	2.19	390	20	23.40	34.59	3.36	23.53	437	0.09	
50	19.20	34.61	0.62	326	30	21.76	34.60	2.23	24.00	392	0.14	
74	17.54	34.68	0.24	282	50	19.20	34.61	0.62	24.69	326	0.21	
102	15.46	34.75	0.09	231	75	17.52	34.68	0.23	25.17	281	0.28	
125	14.52	34.81	0.08	206	100	15.58	34.75	0.09	25.67	233	0.35	
152	13.87	34.80	0.05	194	150	13.92	34.80	0.05	26.07	195	0.46	
209	12.54	34.79	0.12	170	200	12.75	34.79	0.12	26.30	173	0.55	
276	11.38	34.74	0.12	152	250	11.80	34.76	0.12	26.46	158	0.63	

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	$\delta T_3 - 5$ 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	$\delta T_3 - 5$ 10^{-5} cm/g	ΔD dyn. m

59 (1706.28) SPENCER F. BAIRD; May 22, 1959; 0420 GCT; 20°44'N, 106°41.5'W; sounding, 2080 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 16°.

3	27.31	34.96	4.40	524	0	(27.31)	(34.96)	(4.40)	(22.61)	(524)	(0.00)
12	27.33	34.94	4.32	527	10	27.32	34.94	4.33	22.59	526	0.05
31	23.01	34.72	4.80	417	20	25.90	34.86	4.48	22.98	489	0.10
55	18.53	34.83	1.84	294	30	23.09	34.72	4.80	23.72	419	0.15
78	15.62	34.72	0.92	236	50	18.60	34.83	1.88	25.02	295	0.22
105	14.26	34.78	0.57	204	75	15.90	34.73	1.00	25.58	242	0.29
127	13.25	34.78	0.12	184	100	14.39	34.78	0.61	25.95	205	0.34
165	12.56	34.84	0.11	166	150	12.80	34.82	0.11	26.32	172	0.44
212	11.90	34.76	0.06	160	200	12.08	34.78	0.07	26.42	162	0.52
259	11.26	34.74	0.07	150	250	11.39	34.74	0.07	26.52	152	0.60
318	10.43	34.69	0.04	140	300	10.70	34.71	0.05	26.62	143	0.68
413	9.06	34.62	0.12	123	400	9.24	34.63	0.11	26.80	125	0.82
512	7.82a)	34.60	0.11	106	500	7.95	34.60	0.11	26.99	107	0.94
611	6.90	34.52	0.10	99	600	7.00	34.53	0.10	27.07	100	1.05
721	5.92	34.51	0.12	88	700	6.09	34.51	0.11	27.18	90	1.15
878	4.91	34.54	0.18	74	800	5.39	34.53	0.14	27.28	80	1.25
1081	4.12	34.54	0.37	66	1000	4.39	34.54	0.28	27.40	68	1.41
1288	3.42	34.58	0.79	56							

60 (1706.24) SPENCER F. BAIRD; May 22, 1959; 0726 GCT; 20°32'N, 106°59'W; sounding, 1753 fm; wind, 280°, force 4; weather, clear; sea, rough; wire angle, 34°.

2	26.77	34.81	4.34	519	0	(26.77)	(34.81)	(4.34)	(22.67)	(519)	(0.00)
10	26.79	34.81	4.35	520	10	26.79	34.81	4.35	22.66	520	0.05
26	23.22	34.68	3.70	426	20	24.70	34.73	4.01	23.25	464	0.10
47	20.40	34.60	1.90	357	30	22.77	34.67	3.48	23.77	414	0.14
66	16.76	34.49	1.74	278	50	19.82	34.58	1.87	24.51	344	0.22
87	14.85	34.67	0.87	224	75	15.50	34.59	1.29	25.57	242	0.29
105	13.88	34.81	0.10	194	100	14.12	34.78	0.26	26.01	201	0.35
135	13.06	34.81	0.06	178	150	12.78	34.82	0.06	26.32	171	0.44
175	12.44	34.83	0.05	165	200	12.19	34.82	0.10	26.44	160	0.53
214	12.02	34.81	0.11	158	250	11.56	34.78	0.09	26.52	152	0.61
265	11.36	34.77	0.08	149	300	10.88	34.74	0.08	26.61	144	0.68
346	10.21	34.69	0.08	136	400	9.32	34.64	0.10	26.80	125	0.82
433	8.78	34.61	0.12	120	500	7.79	34.55	0.14	26.98	109	0.95
520	7.53	34.54	0.14	107	600	6.72	34.52	0.10	27.10	97	1.06
618	6.58	34.52	0.09	95	700	5.94	34.52	0.10	27.20	87	1.16
760	5.56	34.53	0.13	82	800	5.32	34.53	0.16	27.29	79	1.25
950	4.56	34.55	0.23	70	1000	4.33	34.56	0.28	27.42	67	1.41
1150	3.84	34.60	0.51	59							

61 (1706.20) SPENCER F. BAIRD; May 22, 1959; 1040 GCT; 20°20'N, 107°16'W; sounding, 2251 fm; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 26°.

3	26.34	34.83	4.58	504	0	(26.34)	(34.83)	(4.58)	(22.82)	(504)	(0.00)
12	26.36	34.83	4.57	505	10	26.35	34.83	4.57	22.82	504	0.05
30	23.76	34.72	4.41	438	20	25.00	34.77	4.49	23.18	470	0.10
52	20.64	34.63	1.64	361	30	23.76	34.72	4.41	23.52	438	0.14
72	17.54	34.45	2.54	298	50	21.02	34.64	1.87	24.23	370	0.22
97	14.88	34.69	0.61	223	75	17.40	34.46	2.53	25.02	294	0.31
116	14.14	34.82	0.04	198	100	14.82	34.70	0.57	25.80	221	0.38
150	13.55	34.80	0.11	188	150	13.55	34.80	0.11	26.15	188	0.48
193	12.76	34.81	0.10	172	200	12.62	34.81	0.10	26.34	169	0.57
236	11.93	34.81	0.07	156	250	11.71	34.80	0.08	26.50	154	0.65
292	11.13	34.74	0.10	148	300	11.02	34.73	0.10	26.58	146	0.73
379	9.89	34.69	0.05	130	400	9.55	34.67	0.05	26.79	127	0.87
472	8.33	34.58	0.09	115	500	7.91	34.55	0.09	26.96	110	0.99
566	7.1b)	34.52	0.08	102	600	6.72	34.52	0.10	27.10	97	1.10
670	6.13	34.52	0.11	90	700	5.90	34.52	0.12	27.21	87	1.20
817	5.00	34.52	0.17	76	800	5.12	34.52	0.15	27.30	78	1.29
1012	4.18	34.54	0.33	66	1000	4.21	34.54	0.31	27.42	67	1.45
1216	3.56	34.60	0.72	56							

512

a) Mean value of 7.79 and 7.86°C.

b) Temperature inferred from pressure thermometer and wire depth.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_{-5} 10^{-5} cm/g	ΔD dyn. m

SPENCER F. BAIRD; May 22, 1959; 1410 GCT; 20°13'N, 107°36.5'W; sounding, 1117 fm; wind, 230°, force 4; weather, partly cloudy; sea, very rough; wire angle, 36°. 62 (170G.13)

2	24.52	34.72	4.65	459	0	(24.52)	(34.72)	(4.65)	(23.30)	(459)	(0.00)
10	25.54	34.72	4.64	459	10	24.54	34.72	4.64	23.29	459	0.05
26	24.38	34.70	4.69	456	20	24.48	34.71	4.66	23.30	458	0.09
46	21.46	34.69	2.41	378	30	22.85	34.60	3.70	23.69	421	0.14
63	18.70	34.46	3.43	325	50	20.96	34.66	2.58	24.27	366	0.21
84	15.92	34.51	1.28	258	75	16.85	34.48	2.08	25.17	281	0.30
101	14.98	34.70	0.61	224	100	14.99	34.70	0.62	25.76	224	0.36
132	13.76	34.81	0.05	191	150	13.29	34.83	0.05	26.22	181	0.46
173	12.83	34.83	0.07	172	200	12.27	34.82	0.11	26.42	162	0.55
213	12.00	34.81	0.12	158	250	11.57	34.79	0.08	26.53	152	0.63
265	11.40	34.78	0.07	150	300	10.83	34.73	0.10	26.62	143	0.71
347	10.08	34.67	0.12	136	400	9.30	34.62	0.10	26.80	126	0.85
434	8.76	34.59	0.08	120	500	7.74	34.54	0.12	26.97	110	0.97
525	7.42	34.53	0.13	106	600	6.74	34.56	0.14	27.12	95	1.08
625	6.52	34.56	0.14	91	700	5.89	34.55	0.15	27.24	84	1.17
766	5.40	34.54	0.17	80	800	5.19	34.54	0.18	27.31	77	1.26
955	4.54	34.54	0.30	70	1000	4.39	34.54	0.35	27.40	68	1.42
1152	3.88	34.55	0.50	63							

SPENCER F. BAIRD; May 22, 1959; 2309 GCT; 20°01'N, 107°56'W; sounding, 1774 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 26°. 63 (170.13)

3	26.46	34.81	4.58	510	0	(26.46)	(34.81)	(4.58)	(22.77)	(510)	(0.00)
11	26.48	34.82	4.60	510	10	26.47	34.82	4.60	22.77	510	0.05
29	26.46	34.83	4.59	508	20	26.47	34.82	4.60	22.77	510	0.10
51	21.52	34.74	3.57	375	30	26.46	34.83	4.59	22.78	508	0.15
72	18.08	34.75	1.35	289	50	21.60	34.74	3.60	24.15	377	0.24
97	15.14	34.78	0.10	222	75	17.62	34.75	1.07	25.20	278	0.32
117	14.14	34.83	0.06	198	100	14.96	34.78	0.09	25.83	218	0.39
152	12.91	34.83	0.07	173	150	12.98	34.83	0.07	26.29	174	0.48
197	12.02	34.83	0.14	157	200	11.98	34.83	0.14	26.48	156	0.57
242	11.51	34.81	0.14	149	250	11.43	34.81	0.13	26.56	148	0.65
298	10.95	34.78	0.11	142	300	10.93	34.78	0.11	26.64	141	0.72
388	9.33	34.60	0.11	129	400	9.13	34.58	0.11	26.79	127	0.86
484	7.75a)	34.51	0.10	111	500	7.52	34.51	0.10	26.98	108	0.98
580	6.51	34.51	0.13	95	600	6.34	34.51	0.13	27.15	93	1.09
688	5.74	34.51	0.12	86	700	5.68	34.51	0.12	27.23	85	1.19
841	5.08	34.49	0.16	80	800	5.22	34.49	0.14	27.27	81	1.28
1042	4.22	34.57	0.36	65	1000	4.42	34.56	0.31	27.41	68	1.44
1248	3.58	34.58	0.67	58							

SPENCER F. BAIRD; May 23, 1959; 0208 GCT; 19°50'N, 108°16'W; sounding, 1630 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 28°. 64 (170.17)

3	25.74	34.85	4.61	485	0	(25.74)	(34.85)	(4.61)	(23.02)	(485)	(0.00)
11	25.76	34.86	4.59	485	10	25.76	34.86	4.59	23.02	485	0.05
29	23.29	34.69	4.31	427	20	25.45	34.85	4.54	23.11	477	0.10
50	19.45	34.44	3.96	345	30	23.12	34.68	4.30	23.68	422	0.14
70	17.20	34.69	0.65	273	50	19.45	34.44	3.96	24.50	345	0.22
94	15.34	34.75	0.16	228	75	17.10	34.70	0.59	25.28	270	0.30
113	14.32	34.80	0.12	203	100	15.14	34.76	0.14	25.78	223	0.36
144	13.06	34.78	0.13	180	150	12.90	34.77	0.13	26.26	177	0.46
185	12.20	34.76	0.12	165	200	11.99	34.76	0.11	26.43	161	0.54
226	11.66	34.76	0.10	156	250	11.30	34.73	0.09	26.54	151	0.62
278	10.86	34.69	0.08	147	300	10.52	34.66	0.08	26.62	143	0.70
362	9.60	34.62	0.11	131	400	8.98	34.60	0.11	26.83	123	0.84
452	8.08	34.57	0.11	112	500	7.47	34.54	0.11	27.01	106	0.96
545	6.96	34.52	0.11	100	600	6.46	34.52	0.12	27.14	94	1.06
648	6.12	34.52	0.13	90	700	5.82	34.52	0.14	27.22	86	1.16
797	5.32	34.52	0.16	80	800	5.30	34.52	0.16	27.28	80	1.25
997	4.30	34.57	0.32	65	1000	4.29	34.57	0.33	27.44	65	1.41
1207	3.65	34.56	0.62	60							

a) Mean value of 7.72 and 7.78°C.

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

65 (170.23) SPENCER F. BAIRD; May 23, 1959; 0915 GCT; 19°37'N, 108°39.5'W; sounding, 1299 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 17°.

3	24.46	34.76	4.59	454	0	(24.46)	(34.76)	(4.59)	(23.35)	(454)	(0.00)
12	24.48	34.73	4.58	458	10	24.47	34.73	4.58	23.31	457	0.05
31	24.36	34.75	4.67	452	20	24.46	34.73	4.59	23.31	457	0.09
55	21.63	34.58	4.89	390	30	24.37	34.75	4.66	23.37	452	0.14
77	19.00	34.72	2.90	313	50	22.14	34.60	4.89	23.90	402	0.22
103	15.36	34.73	0.17	230	75	19.15	34.72	3.05	24.79	317	0.31
125	14.62	34.76	0.14	212	100	15.78	34.73	0.36	25.60	239	0.38
162	13.03	34.77	0.14	180	150	13.43	34.77	0.14	26.14	188	0.49
209	11.94	34.78	0.05	159	200	12.12	34.78	0.05	26.42	162	0.58
256	11.26	34.73	0.12	151	250	11.34	34.74	0.12	26.53	152	0.66
315	10.29	34.68	0.10	138	300	10.56	34.69	0.10	26.64	141	0.74
410	8.45	34.57	0.11	118	400	8.63	34.58	0.11	26.86	120	0.87
510	7.14	34.54	0.09	101	500	7.23	34.54	0.09	27.04	103	0.99
612	6.44	34.56	0.15	91	600	6.51	34.56	0.15	27.16	92	1.09
724	5.71	34.54	0.11	83	700	5.87	34.54	0.12	27.23	85	1.19
884	4.98	34.56	0.16	74	800	5.31	34.54	0.12	27.30	78	1.28
1093	4.12	34.61	0.39	60	1000	4.47	34.60	0.25	27.43	66	1.44
1308	3.46	34.61	0.74	54							

66 (170.28) SPENCER F. BAIRD; May 23, 1959; 1215 GCT; 19°26'N, 108°57.5'W; sounding, 1474 fm; wind, 330°, force 3; weather, cloudy; sea, moderate; wire angle, 20°.

3	25.63	34.86	4.61	481	0	(25.63)	(34.86)	(4.61)	(23.06)	(481)	(0.00)
12	25.66	34.87	4.55	481	10	25.65	34.87	4.56	23.06	481	0.05
30	24.32	34.74	4.82	452	20	25.65	34.87	4.55	23.06	481	0.10
53	21.27	34.52	4.96	384	30	24.32	34.74	4.82	23.37	452	0.14
75	19.21	34.45	3.78	338	50	21.78	34.55	4.96	23.96	396	0.23
102	16.66	34.72	1.04	259	75	19.21	34.45	3.78	24.57	338	0.32
123	15.16	34.72	0.68	226	100	16.76	34.72	1.09	25.37	261	0.40
160	13.50	34.78	0.22	188	150	14.00	34.76	0.36	26.03	199	0.51
205	12.15	34.76	0.09	164	200	12.26	34.76	0.09	26.38	166	0.60
252	11.55	34.72	0.12	157	250	11.57	34.72	0.12	26.47	157	0.69
309	10.73	34.65	0.09	148	300	10.88	34.66	0.10	26.56	149	0.77
400	8.96	34.55	0.10	126	400	8.96	34.55	0.10	26.80	126	0.91
496	7.73	34.51	0.11	112	500	7.69	34.51	0.11	26.96	111	1.04
595	6.69	34.48	0.10	100	600	6.64	34.48	0.10	27.08	99	1.15
704	5.88	34.49	0.10	89	700	5.90	34.49	0.10	27.18	89	1.25
859	5.05	34.47	0.17	81	800	5.34	34.47	0.13	27.24	84	1.34
1062	4.26	34.64r	0.32	-	1000	4.49	34.47	0.27	27.33	75	1.52
1271	3.54	34.52	0.72	61							

SPENCER F. BAIRD; May 24, 1959; 1856, 1620 GCT; 22°34.5'N, 109°32'W; sounding, 1552 fm; wind, 330°, force 1; weather, partly cloudy; sea, moderate; wire angle, 11°, 39°.

67
(157.12)

OBSERVED					INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δT_3^{-5} 10^{-5} cm/g	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δT_3^{-5} 10^{-5} cm/g	ΔD dyn. m
2	22.02	34.72	4.71	390	0	(22.02)	(34.72)	(4.71)	(24.02)	(390)	(0.00)
11	21.72	34.73	4.69	381	10	21.73	34.73	4.69	24.11	381	0.04
30	18.82	34.35	4.28	336	20	21.68	34.73	4.67	24.12	380	0.08
39	17.12	34.34	2.69	297	30	18.82	34.35	4.28	24.59	336	0.11
49	16.18	34.38	1.99	273	50	16.08	34.38	1.93	25.28	270	0.17
59	15.06	34.38	1.49	249	75	14.70	34.55	0.85	25.71	229	0.24
73	14.78	34.51	0.93	234	100	13.79	34.70	0.50	26.03	199	0.29
90	14.09	34.69	0.57	207	150	12.57	34.72	0.17	26.28	175	0.38
109	13.51	34.71	0.45	193	200	11.68	34.72	0.14	26.46	158	0.47
127	12.91	34.70	0.30	183	250	11.00	34.68	0.16	26.54	150	0.55
144	12.67	34.72	0.19	177	300	10.33	34.62	0.14	26.62	143	0.63
190	11.82	34.73	0.14	161	400	8.57	34.52	0.11	26.84	122	0.77
240	11.14	34.69	0.16	152	500	7.52	34.50	0.11	26.97	109	0.89
305	10.26	34.61	0.13	143	600	6.55	34.47	0.10	27.08	98	1.00
406	8.50	34.52	0.11	122	700	5.81	34.47	0.10	27.18	90	1.11
508	7.44	34.50	0.12	108	800	5.26	34.48	0.09	27.26	82	1.20
612	6.44	34.49	0.12	96	1000	4.32	34.50	0.21	27.38	71	1.37
717	5.67	34.46	0.15	88	1200	3.75	34.52	0.43	27.45	64	1.53
					1500	3.01	34.57	0.99	27.56	54	1.74
558a)	7.01b)	34.48	0.11	104	2000	2.31	34.58	1.68	27.64	46	2.04
723	5.70	34.47	0.07	88	2500	1.88	34.61	2.25	27.69	41	
889	4.84	34.48	0.09	78							
1059	4.13	34.51	0.29	68							
1229	3.68	34.52	0.49	63							
1400	3.24	34.55	0.80	57							
1573	2.85	34.58	1.14	51							
1747	2.53	34.58	1.41	49							
1923	2.38	34.58	1.61	47							
2101	2.20	34.60	1.78	44							
2282	1.96	-	2.08	-							
2464	1.89	34.61	2.23	42							
2653	1.82	34.61	2.37	41							

a) Overlapping casts; reconciliation of property curves when necessary.
b) Mean value of 6.98 and 7.04°C.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m

HORIZON; July 12, 1959; 1020 GCT; 15°07'N, 120°03'W; sounding, 2247 fm; wind, 150°, force 3; weather, overcast; sea, rough; wire angle, 25°. 1

9	27.98	34.11a)	612	0				0.00
27	27.99	34.04	617	10	27.98	34.11	608	0.06
55	25.84	34.16	543	20	27.98	34.07	611	0.12
108	18.07	34.53	310	30	27.80	34.04	607	0.18
163	12.78	34.86	173	50	26.33	34.13	556	0.30
218	11.81	34.87	156	75	21.82	34.36	414	0.42
273	11.20	34.83	147	100	18.63	34.51	323	0.51
328	10.48	34.83r	134	150	13.10	34.83	180	0.64
440	9.12	34.68	123	200	12.06	34.87	159	0.72
544	7.85	34.62	110	250	11.42	34.84	151	0.80
647	6.95	34.63	97	300	10.82	34.79	146	0.87
750	6.05	34.59	89	400	9.53	34.69	132	1.01
857	5.36	34.58	81	500	8.40	34.63	121	1.14
1060	4.35	34.61	68	600	7.33	34.63	107	1.25
1312	3.50	34.63	58	700	6.48	34.60	98	1.36
1571	2.96	34.65	52	800	5.68	34.59	89	1.45
1845	2.42	34.70	43	1000	4.57	34.60	76	1.62
2076	2.08	34.74	38	1200	3.87	34.62	68	1.76
2364	1.86	34.74	37	1500	3.09	34.64	59	1.95
				2000	2.20	34.72	46	2.21

HORIZON; July 15, 1959; 1015 GCT; 15°07'N, 120°03'W; sounding, 2000+ fm; wind, 080°, force 3; weather, cloudy; sea, rough; wire angle, 33-40°. 2

8	27.95	34.05b)	612	0				0.00
23	27.95	34.04	611	10	27.95	34.05	610	0.06
47	24.84	34.22	507	20	27.95	34.04	611	0.12
94	20.20	34.45	364	30	27.67	34.05	602	0.18
140	13.56	34.79	190	50	24.33	34.26	490	0.29
187	12.29	34.87	161	75	21.64	34.38	407	0.40
233	11.60	34.83	151	100	19.32	34.48	342	0.50
280	11.03	34.79	143	150	13.17	34.82	183	0.63
376	9.90	34.70	132	200	12.06	34.86	160	0.71
461	8.90	34.66	120	250	11.39	34.82	152	0.79
545	7.96	34.70r	(103)	300	10.79	34.77	146	0.87
629	7.07	34.60	98	400	9.60	34.69	133	1.01
717	6.16	34.56	89	500	8.41	34.63	131	1.14
884	5.12	34.59	75	600	7.38	34.60	110	1.26
1099	4.16	34.65	60	700	6.36	34.57	99	1.36
1326	3.48	34.64	54	800	5.54	34.58	88	1.46
1564	2.98	34.67	47	1000	4.53	34.63	74	1.62
1765	2.54	34.65	46	1200	3.84	34.65	66	1.76
2031	2.16	34.67	41	1500	3.12	34.66	58	1.94
2262	1.93	34.71	36	2000	2.19	34.67	48	2.21

a) All salinity values appear to be 0.07‰ too high.
b) All salinity values appear to be 0.03‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z	T	S	δ_T	Z	T	S	δ	ΔD
m	°C	‰	cl/ton	m	°C	‰	cl/ton	dyn m
3	HORIZON; July 17, 1959; 1310 GCT; 9°47'N, 119°37.5'W; sounding, 2350 fm; wind, 270°, force 4; weather, overcast; sea, moderate; wire angle, 40°.							
8	27.56	33.44a)	646	0				0.00
23	27.60	33.47	644	10	27.56	33.44	641	0.06
46	18.35	34.62	310	20	27.55	33.46	641	0.13
92	13.46	34.88	184	30	27.40	33.72	618	0.19
138	12.35	34.88	163	50	17.42	34.68	280	0.28
180	11.88	34.88	155	75	14.73	34.84	211	0.34
225	11.49	34.81	153	100	13.20	34.88	178	0.39
268	10.83	34.80	142	150	12.19	34.88	160	0.47
357	9.92	34.76	130	200	11.70	34.84	155	0.55
434	9.17	34.70	123	250	11.11	34.80	148	0.63
520	8.00	34.66	109	300	10.50	34.79	140	0.70
696	6.08	34.58	89	400	9.51	34.72	130	0.84
869	5.14	34.59	77	500	8.28	34.67	116	0.96
1083	4.25	34.60	67	600	7.17	34.58	108	1.07
1302	3.60	34.63	58	700	6.06	34.58	93	1.17
1534	3.04	34.70	48	800	5.53	34.59	88	1.26
1731	2.60	34.70	44	1000	4.59	34.60	76	1.43
1979	2.16	34.69	43	1200	3.89	34.61	69	1.57
				1500	3.13	34.69	56	1.76
				2000	(2.13)	(34.69)	(47)	(2.02)
4	HORIZON; July 17, 1959; 2145 GCT; 9°02'N, 120°00'W; sounding, 2000+ fm; wind, 070°, force 4; weather, cloudy; sea, moderate; wire angle, 30°.							
8	27.65	33.39b)	652	0				0.00
27	27.60	33.40	649	10	27.64	33.39	648	0.06
53	26.71	34.26	561	20	27.61	33.40	647	0.13
105	13.50	34.78	191	30	27.59	33.41	644	0.19
161	11.89	34.84	157	50	27.07	34.18	574	0.32
216	11.13	34.81	147	75	17.75	34.61	293	0.42
272	10.57	34.82	136	100	13.83	34.74	201	0.49
326	10.10	34.75	134	150	12.12	34.84	161	0.58
436	9.08	34.77	116	200	11.30	34.81	150	0.65
545	7.70	34.60	108	250	10.79	34.82	142	0.73
658	6.67	34.58	96	300	10.30	34.79	136	0.80
767	5.72	34.60	83	400	9.40	34.76	125	0.93
881	5.08	34.78r	(62)	500	8.26	34.66	117	1.05
1099	4.35	34.61	67	600	7.17	34.59	108	1.16
1372	3.50	34.63	57	700	6.10	34.60	92	1.26
1640	2.82	34.67	48	800	5.53	34.60	87	1.35
1924	2.34	34.70	42	1000	4.56	34.61	76	1.51
2178	1.98	34.97r	(28)	1200	3.99	34.62	70	1.66
2488	1.88	34.70	38	1500	3.13	34.66	58	1.85
2720	1.78	34.72	36	2000	2.18	34.70	47	2.11
				2500	1.87	34.70	43	

a) All salinity values appear to be 0.06‰ too high.
b) All salinity values appear to be 0.05‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m
HORIZON; July 21, 1959; 1940, 2120 GCT; 7°32'N, 120°00'W; sounding, 2000+ fm; wind, 180°, force 4; weather, cloudy; sea, rough; wire angle, 11°, 09°.								5
11	27.52	33.78a)	621	0				0.00
30	27.45	33.82	616	10	(27.53)	(33.78)	(617)	(0.06)
59	27.54	34.04	603	20	27.49	33.80	614	0.12
119	15.68	34.73	241	30	27.45	33.82	612	0.18
178	11.99	34.83	161	50	27.53	33.97	605	0.31
237	10.98	34.84	142	75	25.45	34.34	515	0.45
295	10.42	34.79	137	100	18.53	34.70	306	0.55
354	9.96	34.76	131	150	13.07	34.80	183	0.67
474	8.88	34.70	119	200	11.50	34.84	152	0.75
587	7.36	34.61	104	250	10.89	34.83	143	0.83
698	6.20	34.65	86	300	10.40	34.79	138	0.90
809	5.35	34.69r	(73)	400	9.58	34.74	130	1.03
926	4.80	34.62	72	500	8.60	34.68	120	1.16
1145	3.77	34.64	60	600	7.18	34.61	106	1.27
1418	3.06	34.69	50	700	6.17	34.65	91	1.37
1697	2.59	34.70	45	800	5.41	34.62	83	1.46
				1000	4.42	34.62	73	1.61
1980	2.23	34.71	42	1200	3.59	34.66	62	1.75
2220	1.96	34.73	38	1500	2.90	34.69	53	1.92
2521	1.85	34.75	36	2000	2.21	34.71	47	2.17
2766	1.75	34.76	34	2500	1.87	34.75	42	
HORIZON; July 24, 1959; 0605 GCT; 7°00'N, 120°00'W; sounding, 2175 fm; wind, 090°, force 6; weather, overcast; sea, rough; wire angle, 32°.								6
8	27.66	33.95b)	609	0				0.00
27	27.57	34.02	601	10	27.65	33.96	608	0.06
55	27.67	34.14	595	20	27.62	33.99	604	0.12
109	17.86	34.79	282	30	27.60	34.03	601	0.18
164	12.62	34.87	166	50	27.64	34.12	598	0.30
217	11.24	34.84	143	75	26.20	34.30	541	0.44
270	10.66	34.79	137	100	19.72	34.70	336	0.55
326	10.19	34.78	130	150	13.35	34.86	183	0.68
439	9.16	34.76	126	200	11.53	34.84	152	0.77
541	7.42	34.65	99	250	10.87	34.81	143	0.84
644	6.32	34.63	85	300	10.41	34.79	139	0.91
747	5.64	34.60	79	400	9.57	34.77	127	1.04
857	4.99	34.61	71	500	8.13	34.67	114	1.16
1059	3.98	34.61	61	600	6.74	34.64	98	1.27
1313	3.27	34.65	51	700	5.93	34.61	89	1.36
1572	2.70	34.66	45	800	5.28	34.61	83	1.45
1850	2.30	34.65	43	1000	4.28	34.61	73	1.60
2083	2.04	34.67	39	1200	3.54	34.63	63	1.74
2376	1.88	34.70	36	1500	2.92	34.66	55	1.92
2619	1.81	34.69	37	2000	2.20	34.66	50	2.18
				2500	1.84	34.70	44	

a) All salinity values appear to be 0.07‰ too high.
b) All salinity values appear to be 0.02‰ too high.

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HORIZON; July 24, 1959; 1555 GCT; 6°00'N, 120°00'W; sounding, 2140 fm; wind, 180°, force 3; weather, cloudy; sea, rough; wire angle, 40°.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m
8	27.18	34.34a)	569	0				0.00
24	27.20	-		10	27.18	34.34	565	0.06
50	27.20	34.36	568	20	27.19	34.35	565	0.11
97	22.34	34.77	400	30	27.20	34.35	565	0.17
150	13.43	34.89	183	50	27.20	34.36	565	0.28
199	11.66	34.90	149	75	27.17	34.40	564	0.42
248	10.76	34.92r	(132)	100	21.73	34.78	382	0.54
298	10.08	34.80	130	150	13.43	34.89	183	0.68
401	9.00	-		200	11.65	34.90	149	0.77
495	7.82	34.71	103	250	10.74	34.84	139	0.84
591	6.77	34.63	93	300	10.05	34.80	131	0.91
686	5.94	34.60	86	400	9.01	34.76	120	1.03
975	4.31	34.60	68	500	7.77	34.70	107	1.14
1211	3.59	34.65	57	600	6.67	34.62	98	1.25
1460	3.02	34.67	50	700	5.88	34.60	90	1.34
1732	2.62	34.69	45	800	5.27	34.60	84	1.43
1961	2.26	34.71	41	1000	4.21	34.61	72	1.58
				1200	3.62	34.65	63	1.72
				1500	2.93	34.68	54	1.89
				2000	(2.22)	(34.72)	(46)	(2.15)

8

HORIZON; July 25, 1959; 2155 GCT; 5°30'N, 120°00'W; sounding, 2250 fm; wind, 100°, force 3; weather, partly cloudy; sea, rough; wire angle, 23°.

8	27.10	34.12b)	579	0				0.00
26	27.03	34.04	583	10	27.09	34.11	579	0.06
54	26.90	34.05	578	20	27.06	34.07	582	0.12
107	19.36	34.69	324	30	27.02	34.04	582	0.17
165	11.91	34.81	157	50	26.91	34.05	581	0.29
221	10.92	34.83	138	75	25.12	34.14	521	0.43
275	10.08	34.81	125	100	20.10	34.63	350	0.53
331	9.42	34.73	121	150	12.94	34.78	181	0.67
447	8.18	34.63	110	200	11.28	34.82	149	0.75
554	7.02	34.61	95	250	10.49	34.82	136	0.82
660	6.10	34.60	84	300	9.80	34.78	128	0.89
767	5.41	34.63	73	400	8.72	34.66	122	1.01
878	4.75	34.60	69	500	7.60	34.61	110	1.13
1088	3.94	34.60	61	600	6.62	34.60	98	1.23
1348	3.27	34.63	52	700	5.84	34.62	88	1.32
1614	2.72	34.76r	(37)	800	5.22	34.62	82	1.41
1895	2.32	34.69	39	1000	4.23	34.60	72	1.56
2133	2.02	34.67	38	1200	3.66	34.61	66	1.70
2429	1.88	34.67	37	1500	2.91	34.66	56	1.88
2670	1.79	34.04r	(84)	2000	2.20	34.68	48	2.14
				2500	1.85	(34.67)	(46)	

a) All salinity values appear to be 0.06‰ too high.
b) All salinity values appear to be 0.01‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m

HORIZON; July 28-29, 1959; 2235, 0030 GCT; 6°00'N, 120°02'W; sounding, 2162 fm; wind, 180°, force 5; weather, partly cloudy; sea, moderate; wire angle, 43°, 43°. 9

8	27.21	34.20a)	580	0				0.00
23	27.12	34.23	574	10	27.20	34.20	576	0.06
44	27.12	34.25	573	20	27.14	34.22	573	0.12
86	22.78	34.25	447	30	27.12	34.24	572	0.17
136	14.56	34.81	210	50	27.09	34.25	571	0.29
182	11.78	34.87	152	75	24.92	34.25	507	0.42
229	11.08	34.83	143	100	19.10	34.56	330	0.53
274	10.26	34.83	129	150	13.13	34.86	179	0.65
369	9.16	34.74	118	200	11.48	34.85	151	0.74
457	8.28	34.67	110	250	10.68	34.83	139	0.81
543	7.29	34.66	97	300	9.93	34.80	129	0.87
630	6.52	34.58	93	400	8.83	34.71	121	1.00
				500	7.80	34.68	108	1.11
754	5.48	34.60	79	600	6.79	34.60	101	1.22
946	4.48	34.61	68	700	5.91	34.59	91	1.32
1177	3.60	34.65	56	800	5.18	34.60	82	1.40
1416	3.02	34.63	52	1000	4.21	34.62	71	1.56
1674	2.64	34.66	47	1200	3.57	34.65	62	1.69
1896	2.30	34.69	41	1500	2.91	34.64	57	1.87
2178	2.04	34.70	38	2000	2.23	34.70	47	2.13
2411	1.84	34.70	37					

HORIZON; July 29, 1959; 0805 GCT; 7°00'N, 120°02'W; sounding, 1975 fm; wind, 180°, force 5; weather, partly cloudy; sea, moderate; wire angle, 23°. 10

9	27.41	33.96b)	604	0				0.00
27	27.39	33.93	606	10	27.41	33.96	600	0.06
55	27.31	34.11	591	20	27.40	33.94	602	0.12
108	16.24	34.76	251	30	27.38	33.94	600	0.18
165	12.25	-	-	50	27.34	34.07	592	0.30
221	11.06	34.82	146	75	22.37	34.35	428	0.43
275	10.48	34.78	138	100	16.90	34.72	267	0.51
331	9.92	34.78	130	150	12.92	34.86	176	0.62
447	8.84	34.70	119	200	11.39	34.84	150	0.71
552	7.40	34.78r	(92)	250	10.75	34.80	142	0.78
658	6.23	34.61	90	300	10.22	34.78	136	0.85
766	5.46	34.61	80	400	9.24	34.73	125	0.98
878	4.84	34.67r	(69)	500	8.21	34.66	116	1.10
1088	3.96	34.64	62	600	6.86	34.61	101	1.21
1349	3.17	34.66	53	700	5.90	34.61	90	1.30
1615	2.63	34.70	46	800	5.23	34.61	82	1.39
1899	2.30	34.70	43	1000	4.27	34.63	72	1.54
2134	2.06	34.69	42	1200	3.60	34.65	63	1.68
2430	1.88	34.76	35	1500	2.88	34.68	54	1.85
2672	1.80	34.75	36	2000	2.20	34.70	47	2.11
				2500	1.86	34.76	42	

a) All salinity values appear to be 0.04‰ too high.
b) All salinity values appear to be 0.07‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m
11	HORIZON; July 30, 1959; 2120 GCT; 8°19'N, 120°09'W; sounding, 2270 fm; wind, 280°, force 5; weather, overcast; sea, moderate; wire angle, 43°.							
7	27.46	33.33a)	659	0				0.00
22	27.46	33.28	662	10	27.46	33.32	647	0.06
54	27.64	33.71	628	20	27.46	33.29	650	0.13
88	15.08	34.61	235	30	27.47	33.39	643	0.19
132	12.63	34.85	170	50	27.59	33.66	628	0.32
175	11.76	34.87	152	75	20.75	34.24	395	0.45
220	11.16	34.81	146	100	13.92	34.74	203	0.52
265	10.62	34.75	141	150	12.20	34.86	162	0.62
359	9.75	34.73	128	200	11.41	34.84	150	0.69
446	8.84	34.77r	(112)	250	10.79	34.78	145	0.77
533	7.93	34.63	109	300	10.26	34.74	138	0.84
619	7.02	34.63	96	400	9.24	34.70	127	0.97
708	6.22	34.61	87	500	8.25	34.64	117	1.09
871	4.94	34.63	71	600	7.22	34.63	104	1.20
1080	4.16	-		700	6.29	34.62	93	1.30
1298	3.47	34.60	58	800	5.40	34.62	84	1.39
1540	2.97	34.67	48	1000	4.42	34.61	73	1.55
1750	2.60	34.68	44	1200	3.70	34.61	67	1.69
2022	2.16	34.70	40	1500	3.01	34.66	56	1.87
2249	1.98	34.69	39	2000	2.20	34.70	47	2.13
12	HORIZON; August 2, 1959; 2045 GCT; 9°08.5'N, 120°01.5'W; sounding, 2000+ fm; wind, 220°, force 6; weather, overcast; sea, rough; wire angle, 60°.							
8	27.32	33.23	649					
19	27.29	33.18	651					
39	27.30	33.25	646					
60	16.18	34.60	257					
86	12.96	34.83	174					
110	12.21	34.85	159					
136	11.96	34.84	155					
180	11.57	34.87	145					
218	10.94	34.81	139					
262	10.34	34.79	131					
306	9.99	34.92r	(115)					
354	9.62	34.74	123					
398	9.20	34.70	119					
481	8.10	34.63	108					
12B	HORIZON; August 3, 1959; 0905, 1219 GCT; 9°03'N, 119°56'W; sounding, 2000+ fm; wind, 180°, force 5; weather, cloudy; sea, rough; wire angle, 54°, 61°.							
8	27.33	33.40b)	642	0				0.00
23	27.30	33.40	640	10	27.33	33.40	638	0.06
44	25.05	34.34	506	20	27.31	33.40	638	0.13
67	13.72	34.78	197	30	27.29	33.40	637	0.19
107	12.38	34.87	163	50	23.95	34.40	468	0.30
142	11.62	34.81	154	75	13.40	34.82	185	0.38
176	11.10	34.79	147	100	12.60	34.87	167	0.43
214	10.79	34.70r	(147)	150	11.50	34.81	152	0.51
282	10.22	34.78	133	200	10.90	34.79	144	0.58
350	9.68	34.76	126	250	10.51	34.78	138	0.65
421	9.07	34.70	121	300	10.11	34.77	134	0.72
				400	9.24	34.72	126	0.85
464	8.58	34.70	113	500	8.14	34.67	115	0.97
530	7.74	34.67	103	600	7.00	34.63	101	1.08
678	6.34	34.61	89	700	6.18	34.62	93	1.18
868	5.07	34.63	73	800	5.46	34.62	84	1.26
1074	4.34	34.63	66	1000	4.58	34.63	75	1.42
1282	3.72	34.64	59	1200	3.93	34.64	68	1.57
1541	3.02	34.64	52	1500	3.07	34.64	59	1.75
1726	2.58	34.68	45	2000	(2.27)	(34.72)	(46)	(2.02)
1935	2.28	34.72	40					

a) All salinity values appear to be 0.04‰ too high.
b) All salinity values appear to be 0.05‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m

HORIZON; August 8, 1959; 0839, 1034 GCT; 10°00'N, 120°00'W; sounding, 2327 fm; wind, 100°, force 5; weather, overcast; sea, moderate; wire angle, 41°, 39°. 13

8	27.52	33.49a)	640	0				0.00
24	27.50	33.49	639	10	27.52	33.49	637	0.06
46	19.63	34.57	342	20	27.51	33.49	638	0.13
91	13.16	34.85	179	30	27.44	33.53	633	0.19
141	12.05	34.88	157	50	17.90	34.62	295	0.28
190	11.42	34.81	150	75	14.12	34.77	203	0.35
239	10.84	34.78	143	100	12.90	34.87	173	0.39
286	10.40	34.78	135	150	11.92	34.86	156	0.48
381	9.45	34.72	124	200	11.28	34.81	150	0.55
473	8.22	34.62	113	250	10.73	34.79	143	0.62
				300	10.23	34.78	136	0.69
617	6.52	34.61	91	400	9.27	34.70	128	0.83
719	5.75	34.59	83	500	7.90	34.62	115	0.95
824	5.06	34.58	76	600	6.69	34.61	99	1.05
1031	4.27	34.60	66	700	5.89	34.60	90	1.15
1295	3.52	34.60	59	800	5.22	34.60	82	1.24
1556	2.91	34.60	53	1000	4.35	34.60	73	1.39
1837	2.44	34.68	43	1200	3.83	34.60	68	1.53
2181	2.02	34.70	39	1500	3.00	34.61	61	1.73
2398	1.89	34.72	36	2000	2.28	34.70	48	2.00
2630	1.81	34.70	39	2500	1.91	34.71	44	

HORIZON; August 8, 1959; 2035 GCT; 11°12'N, 120°02'W; sounding, 2334 fm; wind, 200°, force 4; weather, cloudy; sea, very rough; wire angle, 36°. 14

7	27.50	32.57b)	718	0				0.00
23	27.54	32.91	726	10	27.51	32.63	698	0.07
48	18.39	34.64	307	20	27.53	32.85	684	0.14
97	13.15	34.82	182	30	27.40	33.21	654	0.21
150	11.92	34.86	157	50	16.90	34.67	269	0.30
202	11.30	34.81	149	75	14.03	34.77	202	0.36
254	10.86	34.80	143	100	13.03	34.84	177	0.40
306	10.22	34.77	134	150	11.92	34.86	156	0.49
411	9.16	34.70	122	200	11.32	34.81	150	0.56
515	7.86	34.65	107	250	10.90	34.80	145	0.64
621	6.56	34.60	93	300	10.31	34.78	138	0.71
725	5.84	34.59	84	400	9.26	34.70	127	0.84
833	5.14	34.59	77	500	8.03	34.65	114	0.96
1040	4.26	34.60	67	600	6.78	34.61	101	1.07
1303	3.47	34.65	55	700	5.99	34.59	92	1.16
1562	2.88	34.67	48	800	5.32	34.59	85	1.25
1839	2.40	34.69	43	1000	4.40	34.60	74	1.41
2178	1.99	34.70	39	1200	3.80	34.62	67	1.55
2391	1.89	34.73	36	1500	3.00	34.66	56	1.74
2620	1.79	34.69	38	2000	2.28	34.70	48	2.00
				2500	1.91	34.71	44	

a) All salinity values appear to be 0.04‰ too high.
b) All salinity values appear to be 0.05‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m
15	HORIZON; August 10, 1959; 0425 GCT; 11°33'N, 119°56'W; sounding, 2000+ fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 17°.							
10	27.76	33.55a)	642	0				0.00
30	24.76	34.43	489	10	27.76	33.55	640	0.06
58	17.18	34.70	273	20	26.23	34.05	559	0.12
114	12.58	34.88	155	30	24.76	34.43	488	0.17
177	11.46	34.81	150	50	18.10	34.69	295	0.25
239	10.92	34.80	142	75	14.95	34.74	223	0.32
362	9.76	34.70	130	100	13.13	34.86	178	0.37
485	8.38	34.63	124	150	11.89	34.84	157	0.45
607	7.06	34.59	98	200	11.23	34.81	148	0.53
735	5.94	34.58	85	250	10.82	34.80	144	0.60
863	5.07	34.61	73	300	10.36	34.76	140	0.67
983	4.55	34.60	68	400	9.34	34.68	130	0.80
1225	3.72	34.61	59	500	8.20	34.63	118	0.93
1525	2.94	34.63	51	600	7.14	34.59	107	1.04
1815	2.44	34.69	42	700	6.22	34.58	96	1.14
2119	2.11	34.68	40	800	5.44	34.60	86	1.23
2490	1.86	34.69	37	1000	4.48	34.60	74	1.39
				1200	3.83	34.61	68	1.53
				1500	2.99	34.63	58	1.72
				2000	2.27	34.68	48	1.99
				2500	(1.86)	(34.69)	(45)	
16	HORIZON; August 13, 1959; 1130 GCT; 13°15'N, 119°59'W; sounding, 2315 fm; wind, 230°, force 3; weather, overcast; sea, slight; wire angle, 10°.							
11	27.99	33.81	629	0				0.00
31	27.80	33.90	615	10	(28.00)	(33.81)	(629)	(0.06)
60	23.80	34.44	459	20	27.92	33.86	623	0.13
118	13.29	34.83	180	30	27.81	33.90	617	0.19
177	11.90	34.85	153	50	25.80	34.22	534	0.30
236	11.28	34.78	147	75	21.21	34.60	381	0.42
293	10.74	34.76	140	100	16.65	34.70	263	0.50
352	10.07	34.74	130	150	12.50	34.86	167	0.60
473	8.39	34.63	112	200	11.63	34.84	154	0.68
586	7.36r	34.58	(101)	250	11.14	34.80	149	0.76
697	6.09	34.54	88	300	10.69	34.76	145	0.83
810	5.39	34.58	76	400	9.46	34.70	131	0.97
927	4.79	34.57	71	500	8.10	34.63	117	1.10
1143	3.98	34.58	62	600	6.98	34.58	105	1.21
1414	3.23	34.60	53	700	6.08	34.55	96	1.31
1689	2.64	34.63	46	800	5.48	34.58	88	1.40
1981	2.24	34.66	40	1000	4.46	34.57	77	1.56
2223	1.99	34.68	37	1200	3.82	34.58	70	1.71
2525	1.82	34.67	37	1500	3.07	34.60	62	1.91
2769	1.73	34.67	36	2000	2.23	34.66	50	2.19
				2500	1.84	34.67	46	

a) All salinity values appear to be 0.03‰ too high.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED	
Z m	T °C	S ‰	δ_T cl/ton	Z m	T °C	S ‰	δ cl/ton	ΔD dyn m

HORIZON; August 14, 1959; 0455 GCT; 14°54'N, 120°00'W; sounding, 2205 fm; wind, 220°, force 2; weather, overcast; sea, slight; wire angle, 20°. 17

9	28.10	33.75	636	0				0.00
24	26.83	33.96	582	10	28.09	33.75	636	0.06
52	24.90	34.04	519	20	27.13	33.91	595	0.12
103	17.40	34.37	301	30	26.44	33.98	569	0.18
155	13.14	34.74	184	50	24.95	34.04	522	0.29
203	12.00	34.81	158	75	21.80	34.19	425	0.41
251	11.38	34.78	149	100	17.57	34.37	306	0.50
307	10.68	34.72	141	150	13.30	34.73	192	0.62
407	9.48	34.65	127	200	12.08	34.81	164	0.71
509	8.09	34.54	114	250	11.39	34.78	155	0.79
610	6.87	34.52	99	300	10.76	34.73	149	0.87
711	5.98	34.55	86	400	9.58	34.66	135	1.01
812	5.28	34.51	80	500	8.19	34.55	123	1.14
1016	4.34	34.56	67	600	6.94	34.52	109	1.26
1260	3.53	34.58	57	700	6.04	34.54	96	1.36
1505	2.94	34.61	50	800	5.34	34.52	89	1.45
1773	2.51	34.65	43	1000	4.43	34.55	78	1.62
2009	2.14	34.63	42	1200	3.74	34.57	69	1.77
2281	1.91	34.66	37	1500	2.96	34.61	59	1.96
2520	1.78	34.68	35	2000	2.16	34.64	51	2.23
				2500	1.80	34.67	46	

HORIZON; August 16, 1959; 1046 GCT; 16°30'N, 120°00'W; sounding, 2140 fm; wind, 140°, force 3; weather, partly cloudy; sea, slight; wire angle, 15°. 18

10	28.10	33.86a)	632	0				0.00
24	26.25	34.16	554	10	28.10	33.86	628	0.06
52	24.44	34.34	488	20	26.67	34.10	568	0.12
105	16.49	34.42	280	30	25.88	34.20	537	0.17
157	12.64	34.77	176	50	24.60	34.33	492	0.28
206	11.58	34.81	154	75	21.95	34.38	415	0.39
256	10.88	34.82	141	100	17.20	34.40	296	0.48
314	10.26	34.70	139	150	12.82	34.76	180	0.60
417	8.74	34.63	121	200	11.70	34.81	157	0.68
521	7.46	34.58	106	250	10.96	34.81	145	0.76
625	6.54	34.56	96	300	10.40	34.73	143	0.83
729	5.66	34.55	86	400	9.01	34.64	129	0.97
833	5.13	34.58	77	500	7.72	34.58	114	1.09
1042	4.24	34.58	68	600	6.76	34.56	103	1.20
1293	3.44	34.63	57	700	5.90	34.56	92	1.29
1545	2.80	34.67	47	800	5.28	34.57	86	1.38
1818	2.36	34.63	47	1000	4.40	34.58	76	1.54
2057	2.02	34.70	39	1200	3.70	34.61	67	1.69
2330	1.86	34.74r	(34)	1500	2.93	34.65	56	1.87
2574	1.75	34.70	37	2000	2.14	34.67	48	2.13
				2500	1.81	34.70	44	

a) All salinity values appear to be 0.05‰ too high.

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; November 11, 1959; 1522 GCT; 16°05'N, 103°26'W; sounding, 2025 fm; wind, 310°, 4 kt; weather, partly cloudy; sea, slight; wire angle, 06°.[a]																		
0	29.17	33.702b)			0.2	0.00	0.2	674	0	29.17	33.70			0.2	0.00	0.2	673	0.00
10	29.12	33.704			0.3	0.00	0.3	672	10	29.12	33.70			0.3	0.00	0.3	672	0.07
20	29.14	33.704			0.6	0.00	0.6	673	20	29.14	33.70			0.6	0.00	0.6	673	0.13
30	29.06	33.695			0.3	0.00	0.4	671	30	29.06	33.70			0.3	0.00	0.4	670	0.20
40	27.84	33.890			1.8	0.00	0.4	618	50	26.26	34.17			1.4	0.00	1.0	550	0.32
50	26.26	34.172			1.4	0.00	1.0	550	75	18.97	34.62			10.5	0.09	26.2	320	0.43
65	20.90	34.544			7.0	0.25	18.8	373	100	16.00	34.74			10.2	0.00	23.8	242	0.50
85	17.40	34.672			10.8	0.00	26.5	279	150	14.12	34.81			18.0	0.00	32.5	199	0.61
109	15.38	34.774			10.6	0.00	24.3	227	200	12.74	34.84			26.6	0.00	33.5	169	0.70
149	14.13	34.809			17.2	0.00	32.4	199	250	11.59	34.81			25.2	0.50	30.6	150	0.78
200	12.74	34.842			26.6	0.00	33.5	169	300	10.40	34.73			26.0	0.95	30.2	136	0.85
250	11.59	34.807			-	-	-	151	400	9.10	34.66			48.7	0.92	33.6	120	0.98
299	10.41	34.733			25.2	0.75	30.0	136	500	7.86	34.62			31.0	1.04	28.0	105	1.10
399	9.11	34.665			48.8	0.72	34.0	120	600	6.71	34.58			33.3	0.68	31.2	93	1.19
548	7.30	34.595			26.8	0.86	28.2	99	700	5.68	34.56			52.5	0.16	36.9	81	1.28
747	5.24	34.564			55.4	0.06	38.5	76	800	4.97	34.57			57.6	0.03	39.4	73	1.36
946	4.32	34.578			60.5	0.00	41.2	65	1000	4.09	34.59			60.8	0.00	42.5	62	1.49
1147	3.64	34.601			60.2	0.00	43.4	57										
SPENCER F. BAIRD; November 14, 1959; 1417 GCT; 11°14.5'N, 91°16'W; sounding, 2000 fm; wind, 350°, 3 kt; weather, partly cloudy; sea, smooth; wire angle, 17°.																		
0	28.30	33.419	3.87c)	0.65	0.7	0.07	1.5	666	0	28.30	33.42	3.87	0.65	0.7	0.07	1.5	666	0.00
10	28.17	33.410	4.14	0.66	1.8	0.07	3.0	663	10	28.17	33.41	4.14	0.66	1.8	0.07	3.0	663	0.07
19	17.87	34.738	1.32	1.93	15.0	0.21	24.8	286	20	17.30	34.77	1.14	1.97	15.3	0.18	29.0	269	0.11
29	15.57	34.851	0.51	2.25	19.3	0.16	38.3	226	30	15.53	34.86	0.49	2.35	19.5	0.16	38.2	223	0.14
38	15.40	34.905	0.45	2.68	20.2	0.15	32.5	218	50	15.09	34.89	0.56	2.36	17.8	0.08	34.7	212	0.18
48	15.20	34.904	0.54	2.35	18.8	0.08	34.0	214	75	13.80	34.82	0.38	2.66	15.7	0.03	38.2	191	0.23
62	14.30	34.848	0.62	2.66	-	0.09	-	199	100	13.22	34.86	0.35	2.60	16.8	0.01	39.6	177	0.28
81	13.62	34.817	0.49	2.66	15.8	0.02	38.6	188	150	12.51	34.84	0.32	2.51	24.7	0.05	36.6	165	0.36
104	13.19	34.855	0.35	2.59	17.0	0.01	39.6	176	200	12.08	34.84	0.40	2.65	24.3	0.05	38.0	157	0.44
142	12.60	34.843	0.61	2.50	24.3	0.05	-	167	250	11.53	34.81	0.23	2.78	24.5	0.04	44.0	150	0.52
189	12.16	34.842	0.40	2.63	24.8	0.05	27.3	159	300	11.05	34.78	0.15	2.88	26.7	0.04	48.8	143	0.59
236	11.65	34.812	0.29	-	-	-	-	152	400	9.88	34.72	0.21	2.99	39.5	0.05	54.7	128	0.73
281	11.26	34.789	0.12	2.84	25.1	0.04	46.8	146	500	8.68	34.66	0.01	3.23	62.8	0.03	56.8	114	0.85
372	10.26	34.736	0.22	2.95	32.8	0.04	-	133	600	7.63	34.61	0.00	3.55	40.0	0.01	56.6	103	0.96
512	8.54	34.649	0.00	3.36	63.0	0.03	56.6	113	700	6.85	34.58	0.00	3.66	34.3	0.00	55.0	94	1.06
703	6.81	34.584	0.00	3.66	34.8	0.00	55.0	94	800	6.14	34.56	0.02	3.58	47.8	0.00	53.3	87	1.15
897	5.56	34.564	0.10	3.54	-	0.01	52.8	80	1000	5.00	34.57	0.24	3.66	74.7	0.05	52.2	73	1.31
1097	4.65	34.571	0.32	3.76	86.0	0.02	52.0	69										

a) The biological data collected on Costa Rica Dome cruise have been presented in a Scripps Institution data report, "Physical, chemical and biological data, Costa Rica Dome cruise, 6 November - 14 December 1959," SIO Reference 60-20.

b) The salinity values reported are the means of replicate determinations; accuracy, 0.0044‰.

c) Nearly all observed values of dissolved oxygen are based on single Winkler determinations.

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; November 14, 1959; 2123 GCT; 10°44'N, 90°50'W; sounding, 2000 fm; wind, 350°, 6 kt; weather, partly cloudy; sea, smooth; wire angle, 05°.																		
0	27.10	33.868	4.04	0.90	4.0	0.12	7.4	597	0	27.10	33.87	4.04	0.90	4.0	0.12	7.4	597	0.00
10	26.70	33.927	4.02	1.04	6.4	0.10	7.6	580	10	26.70	33.93	4.02	1.04	6.4	0.10	7.6	580	0.06
20	21.93	34.399	2.78	1.47	12.1	0.10	21.1	411	20	21.93	33.40	2.78	1.47	12.1	0.10	21.1	411	0.11
30	15.46	34.804	0.79	2.12	20.0	0.04	35.5	227	30	15.46	34.80	2.68	2.12	20.0	0.04	35.5	227	0.14
39	14.46	34.775	1.06	2.19	17.8	0.35	24.0	208	50	14.24	34.86	0.74	2.31	23.2	0.26	27.3	197	0.18
49	14.25	34.860	0.75	2.30	23.2	0.06	27.4	197	75	13.33	34.84	0.70	2.45	23.1	0.03	35.0	181	0.23
64	13.62	34.821	0.69	2.44	22.0	0.03	29.8	188	100	12.81	34.84	0.88	2.23	23.3	0.02	35.0	171	0.27
84	13.12	34.850	0.71	2.46	23.7	0.03	43.0	176	150	12.30	34.85	0.70	2.37	24.9	0.02	30.5	160	0.36
109	12.63	34.834	0.90	2.25	23.2	0.02	30.2	168	200	11.72	34.82	0.61	2.44	26.2	0.02	40.2	152	0.43
148	12.32	34.846	0.70	2.36	25.0	0.02	30.0	161	250	11.21	34.78	0.46	2.67	26.8	0.01	36.1	146	0.51
198	11.74	34.819	0.62	2.43	26.2	0.02	40.2	152	300	10.77	34.75	0.34	2.67	31.2	0.02	46.8	141	0.58
248	11.24	34.778	0.47	2.67	26.8	0.01	36.0	147	400	9.83	34.70	0.04	2.94	37.5	0.02	30.7	129	0.72
298	10.79	34.751	0.35	2.66	31.3	0.02	46.8	141	500	8.57	34.64	0.00	3.16	52.3	0.10	44.9	114	0.84
398	9.86	34.699	0.04	2.93	37.6	0.02	30.4	129	600	7.56	34.61	0.00	3.24	58.6	0.08	46.1	101	0.94
548	8.04	34.619	0.00	3.20	55.8	0.11	47.0	108	700	6.77	34.59	0.05	3.28	64.5	0.03	42.9	93	1.04
748	6.44	34.586	0.10	3.33	67.4	0.03	42.0	88	800	6.10	34.58	0.21	3.53	70.5	0.02	41.8	85	1.13
948	5.32	34.565	0.38	3.90	80.6	0.02	-	77	1000	5.03	34.56	0.40	3.84	84.0	0.02	41.5	74	1.29
1148	4.29	34.570	0.44	3.52	91.2	0.02	42.6	66										
SPENCER F. BAIRD; November 15, 1959; 0126 GCT; 10°24'N, 90°29'W; sounding, 1800 fm; wind, 040°, 3 kt; weather, partly cloudy; sea, smooth; wire angle, 09°.																		
0	26.97	33.690	4.30	0.69				606	0	26.97	33.69	4.30	0.69				605	0.00
10	26.31	33.772	4.36	0.79				580	10	26.31	33.72	4.36	0.79				580	0.06
20	22.01	34.370	2.78	1.47				415	20	22.01	34.37	2.78	1.47				415	0.11
29	15.97	34.784	0.93	2.16				239	30	15.85	34.78	0.88	2.16				236	0.14
39	14.92	34.799	0.55	2.20				215	50	14.10	34.78	0.49	2.39				200	0.19
49	14.18	34.784	0.50	2.38				202	75	13.00	34.78	0.54	2.41				178	0.23
63	13.38	34.781	0.40	2.42				186	100	12.70	34.82	0.71	2.37				170	0.28
83	12.87	34.786	0.60	2.40				175	150	12.17	34.84	0.41	2.40				158	0.36
107	12.65	34.834	0.72	2.37				168	200	11.56	34.79	0.34	2.46				151	0.44
146	12.25	34.846	0.43	2.38				160	250	10.95	34.75	0.66	2.51				143	0.51
194	11.64	34.804	0.33	2.46				152	300	10.69	34.75	0.58	2.52				139	0.58
243	11.01	34.749	0.70	2.51				145	400	9.85	34.72	0.36	2.72				128	0.71
293	10.76	34.751	0.60	2.52				140	500	8.70	34.66	0.12	3.13				115	0.83
392	9.91	34.715	0.39	2.70				129	600	7.69	34.61	0.05	3.27				103	0.94
541	8.20	34.629	0.04	3.24				109	700	6.84	34.59	0.07	3.31				94	1.04
741	6.51	34.578	0.07	3.32				90	800	6.11	34.58	0.08	3.34				85	1.13
941	5.18	34.571	0.19	-				75	1000	4.87	34.57	0.30	3.38				71	1.29
1141	4.24	34.579	0.52	3.40				64										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; November 15, 1959; 0547 GCT; 10°10'N, 90°05'W; sounding, 1850 fm; wind, 020°, 3 kt; weather, clear; sea, smooth; wire angle, 26°.																		
0	25.81	34.046	4.28	0.95	5.2	0.08	11.8	545	0	25.81	34.05	4.28	0.95	5.2	0.08	11.8	546	0.00
9	25.02	34.081	4.18	1.05	4.2	0.19	10.2	520	10	24.85	34.08	4.17	1.06	4.3	0.21	10.7	514	0.05
18	21.66	34.198	2.92	1.32	9.8	0.11	17.5	418	20	19.25	34.45	2.00	1.62	17.9	0.01	28.3	339	0.10
27	16.32	34.794	0.97	2.09	19.8	0.03	32.6	246	30	15.50	34.81	0.78	2.26	19.3	0.16	32.0	227	0.12
36	15.00	34.820	0.62	2.34	20.0	0.26	33.2	216	50	14.25	34.84	0.38	2.43	19.9	0.17	37.3	199	0.17
45	14.44	34.835	0.37	2.44	19.8	0.22	37.4	203	75	13.36	34.83	0.48	2.37	25.3	0.04	38.1	181	0.21
59	13.90	34.843	0.41	2.41	-	-	-	192	100	12.78	34.85	0.59	2.37	25.2	0.04	40.0	169	0.26
76	13.31	34.833	0.48	2.37	25.2	0.04	38.1	181	150	12.48	34.88	0.52	2.39	24.3	0.05	39.9	161	0.34
98	12.80	34.846	0.59	2.37	25.2	0.04	40.0	170	200	11.92	34.82	0.56	2.46	26.5	0.02	40.1	155	0.42
131	12.67	34.876	0.58	2.36	-	-	40.0	165	250	11.31	34.80	0.63	2.48	27.5	0.04	42.0	147	0.49
173	12.21	34.854	0.44	2.43	24.6	0.05	-	159	300	10.74	34.75	0.66	2.55	28.0	0.03		140	0.57
215	11.73	34.814	0.63	2.47	27.6	0.01	-	153	400	9.92	34.71	0.44	2.67	29.9	0.01		129	0.70
254	11.23	34.785	0.63	2.48	27.6	0.04	42.2	146	500	8.80	34.66	0.03	2.97	33.9			116	0.82
332	10.44	34.734	0.68	2.59	-	-	-	136	600	7.58	34.60	0.00	3.26	40.2			102	0.93
460	9.34	34.683	0.12	2.82	-	0.00	-	123	700	6.66	34.58	0.04	3.37				92	1.03
637	7.14	34.593	0.00	3.32	43.0	-	-	98	800	5.96	34.58	0.13	3.40				83	1.21
819	5.85	34.578	0.14	3.41	-	-	-	82	1000	4.83	34.58	0.30	3.53				71	1.36
1010	4.77	34.575	0.32	3.55	-	-	-	70										
SPENCER F. BAIRD; November 15, 1959; 0959 GCT; 9°54.5'N, 89°39'W; sounding, 1900 fm; wind, 010°, 10 kt; weather, partly cloudy; sea, slight; wire angle, 16°.																		
0	26.32	33.523	4.56	0.49	00.0	0.04	1.6	598	0	26.32	33.52	4.56	0.49	0.0	0.04	1.6	599	0.00
10	26.31	33.532	4.55	0.49	-	0.04	1.8	597	10	26.31	33.53	4.55	0.49	0.0	0.04	1.8	598	0.06
19	22.08	34.253	3.00	1.35	10.0	0.11	16.0	426	20	21.50	34.32	2.85	0.92	10.0	0.17	16.7	405	0.11
29	17.43	34.667	1.90	1.76	14.8	0.18	25.2	280	30	17.07	34.70	1.73	1.84	16.2	0.17	27.5	269	0.14
38	15.10	34.871	0.74	2.18	19.0	0.14	26.6	214	50	14.42	34.85	0.58	2.34	18.1	0.13	36.0	201	0.19
48	14.46	34.851	0.57	2.34	18.2	0.13	36.0	202	75	13.87	34.89	0.87	2.09	17.4	0.06	38.7	187	0.24
62	14.13	34.861	-	-	-	-	-	195	100	13.50	34.91	0.90	2.13	17.8	0.03	38.4	179	0.28
81	13.74	34.900	0.89	2.08	17.6	0.05	38.8	184	150	12.91	34.90	0.99	2.25	20.7	0.02	36.3	169	0.37
104	13.44	34.908	0.91	2.21	18.0	0.03	38.2	178	200	12.10	34.84	0.91	2.38	26.3	0.03	37.5	157	0.45
142	13.00	34.899	0.99	2.24	19.4	0.02	36.5	170	250	11.50	34.81	0.63	2.51	27.1	0.01	42.4	149	0.53
189	12.24	34.850	-	2.36	-	0.05	-	159	300	10.59	34.77	0.42	2.56	28.9	0.04	48.9	138	0.60
236	11.60	34.824	0.71	2.48	27.0	0.00	41.6	150	400	9.90	34.70	0.62	2.83	33.8	0.05	50.8	130	0.74
283	11.16	34.776	0.40	2.55	27.6	0.03	45.0	145	500	8.71	34.64	0.12	3.16	42.9	0.23	48.6	116	0.86
377	10.14	34.718	0.68	2.72	31.2	0.04	-	132	600	7.57	34.62	0.06	3.30	50.4	0.18	50.2	101	0.97
520	8.46	34.628	0.05	3.20	44.2	0.26	48.3	113	700	6.70	34.60	0.07	3.34	58.1	0.04	53.7	91	1.06
716	6.50	34.599	0.07	3.35	60.8	0.02	54.8	88	800	5.83	34.58	0.11	3.43	69.0	0.01	57.2	82	1.15
913	5.12	34.564	0.23	3.48	81.4	0.01	58.2	75	1000	4.70	34.57	0.36	3.50	84.0	0.02	58.9	70	1.30
1112	4.22	34.586	0.53	3.51	81.0	0.02	60.8	63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 15, 1959; 1436 GCT; 9°28'N, 89°23'W; sounding, 1800 fm; wind, 030°, 8 kt; weather, partly cloudy; sea, slight; wire angle, 15°.																		
0	26.08	33.608	4.22	0.73				585	0	26.08	33.61	4.22	0.73				585	0.00
9	25.18	33.694	4.14	0.65				552	10	24.43	33.79	4.00	0.75				523	0.06
19	18.42	34.662	1.83	1.74				304	20	18.16	34.68	1.73	1.81				296	0.10
29	15.42	34.784	1.01	2.20				228	30	15.40	34.78	1.02	2.19				227	0.12
38	14.87	34.893	1.46	1.99				208	50	14.40	34.88	1.31	2.04				199	0.17
48	14.44	34.879	1.40	2.02				200	75	13.95	34.93	1.00	2.20				186	0.21
62	14.18	34.918	0.98	2.18				192	100	13.50	34.92	0.90	2.13				177	0.26
81	13.82	34.934	1.02	2.21				184	150	12.98	34.90	0.85	2.27				169	0.34
105	13.42	34.917	0.87	2.11				176	200	12.44	34.87	0.69	2.34				161	0.43
144	13.00	34.899	0.86	2.26				170	250	11.73	34.82	0.53	2.32				152	0.51
191	12.54	34.883	0.71	2.35				163	300	11.14	34.78	0.60	2.53				145	0.58
238	11.88	34.834	0.52	2.30				154	400	9.99	34.71	0.55	2.79				130	0.72
284	11.34	34.787	0.60	2.45				148	500	8.63	34.65	0.13	2.88				114	0.84
378	10.29	34.732	0.59	2.75				134	600	7.35	34.59	0.07	3.07				100	0.95
518	8.35	34.641	0.06	2.89				110	700	6.41	34.58	0.08	3.27				89	1.04
709	6.37	34.579	0.08	3.28				88	800	5.74	34.58	0.16	3.35				80	1.13
905	5.14	34.578	0.28	3.41				74	1000	4.64	34.58	0.41	3.42				68	1.27
1103	4.18	34.575	0.57	3.42				64										
SPENCER F. BAIRD; November 15, 1959; 1904 GCT; 9°00'N, 89°03'W; sounding, 1900 fm; wind, 020°, 3 kt; weather, partly cloudy; sea, slight; wire angle, 24°.																		
0	26.62	33.529	4.34	0.77	3.0	0.11	5.3	607	0	26.62	33.53	4.34	0.77	3.0	0.11	5.3	607	0.00
9	26.05	33.592	4.28	0.79	5.0	0.11	5.5	585	10	25.70	33.64	4.19	0.82	5.8	0.11	6.8	571	0.06
18	22.85	34.112	3.21	1.16	4.6	0.11	13.8	457	20	22.00	34.23	2.90	1.27	4.3	0.13	14.5	425	0.11
28	17.62	34.764	1.25	2.00	15.0	0.18	23.9	277	30	17.05	34.78	1.20	2.06	18.8	0.13	25.3	262	0.14
37	15.48	34.792	1.04	2.16	21.8	0.06	-	228	50	14.15	34.83	0.50	2.38	25.0	0.15	32.0	197	0.19
46	14.52	34.837	0.41	2.42	22.5	0.09	30.5	204	75	13.60	34.89	1.09	2.19	21.6	0.05	29.7	182	0.24
60	13.79	34.834	0.82	2.32	23.6	0.14	31.4	190	100	13.40	34.91	0.86	2.22	21.2	0.05	29.9	177	0.28
78	13.57	34.887	1.09	2.18	21.6	0.05	29.5	182	150	12.80	34.89	0.74	2.34	31.4	0.06	38.7	167	0.38
100	13.40	34.912	0.86	2.22	21.2	0.05	-	177	200	12.10	34.84	0.76	2.39	26.1	0.04	41.4	157	0.45
137	12.97	34.905	0.74	2.34	31.4	0.06	-	169	250	11.49	34.80	0.76	2.47	28.2	0.01		150	0.52
181	12.37	34.864	0.75	2.33	-	-	-	161	300	10.91	34.77	0.68	2.54	32.1	0.00		141	0.60
225	11.77	34.815	0.77	2.46	26.4	0.02	42.0	153	400	9.87	34.71	0.30	2.84	40.1	0.01		129	0.73
267	11.27	34.781	0.76	2.47	-	-	-	147	500	8.70	34.65	0.08	3.06	48.0	0.05		116	0.86
354	10.35	34.739	0.46	2.71	-	-	-	134	600	7.52	34.60	0.06	3.25	56.8	0.07		102	0.96
484	8.90	34.665	0.09	3.05	46.6	0.04	-	117	700	6.54	34.58	0.07	3.33	65.7	0.05		90	1.06
663	6.83	34.588	0.05	3.28	62.2	0.06	-	94	800	5.88	34.58	0.16	3.42	74.2	0.04		82	1.15
851	5.55	34.580	0.23	3.46	79.8	0.03	42.0	78	1000	4.72	34.58	0.43	3.53	90.3	0.03	44.7	69	1.30
1048	4.49	34.578	0.49	3.56	92.2	0.03	45.5	67										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 16, 1959; 0249 GCT; 8°39'N, 88°39'W; sounding, 1950 fm; wind, 060°, 2 kt; weather, clear; sea, moderate; wire angle, 20°.																		
0	26.47	33.528	4.28	0.72				602	0	26.47	33.53	4.28	0.72				602	0.00
9	22.00	34.218	3.12	1.16				426	10	21.60	34.28	3.00	1.22				410	0.05
19	17.62	34.792	1.24	1.89				275	20	17.33	34.81	1.14	1.97				267	0.08
28	16.10	34.849	0.81	2.19				237	30	15.87	34.84	0.82	2.18				232	0.11
37	15.01	34.771	1.00	2.17				220	50	14.22	34.74	1.03	2.19				206	0.15
47	14.33	34.743	1.00	2.20				208	75	13.44	34.77	0.56	2.43				188	0.20
61	13.92	34.772	1.20	2.13				197	100	12.80	34.79	0.65	2.42				173	0.25
79	13.33	34.773	0.53	2.47				186	150	12.15	34.80	0.93	2.31				161	0.33
102	12.76	34.793	0.67	2.41				173	200	11.59	34.78	1.03	2.34				153	0.41
138	12.35	34.806	0.86	2.34				164	250	11.30	34.77	0.90	2.54				148	0.48
184	11.75	34.781	1.04	2.27				156	300	10.95	34.76	0.58	2.68				143	0.56
229	11.39	34.774	0.98	-				150	400	9.74	34.70	0.06	2.94				127	0.69
274	11.17	34.772	0.76	2.61				146	500	8.40	34.63	0.04	3.11				112	0.81
362	10.24	34.725	0.09	2.87				134	600	7.32	34.60	0.06	3.21				99	0.92
497	8.43	34.634	0.03	3.10				112	700	6.35	34.58	0.18	3.34				87	1.01
683	6.52	34.588	0.13	3.29				90	800	5.67	34.58	0.33	3.46				79	1.09
877	5.25	34.575	0.41	3.52				75	1000	4.64	34.58	0.43	3.48				68	1.24
1075	4.32	34.579	0.58	3.42				65										
SPENCER F. BAIRD; November 16, 1959; 0710 GCT; 8°17'N, 88°16'W; sounding, 1900 fm; wind, calm; weather, partly cloudy; sea, smooth; wire angle, 00°.																		
0	26.32	33.605	4.09	0.73				593	0	26.32	33.61	4.09	0.73				593	0.00
10	21.70	34.267	2.94	1.24				414	10	21.70	34.27	2.94	1.24				440	0.05
20	16.40	34.756	1.50	1.83				250	20	16.40	34.76	1.50	1.83				250	0.09
30	15.60	34.759	1.40	1.95				233	30	15.60	34.76	1.40	1.95				232	0.11
40	14.72	34.809	0.46	2.24				211	50	14.13	34.85	0.43	2.28				197	0.15
49	14.19	34.847	0.42	2.29				197	75	13.08	34.79	0.92	2.20				179	0.20
64	13.53	34.833	0.86	2.20				185	100	12.67	34.83	0.91	2.24				168	0.24
84	12.82	34.784	0.94	2.20				175	150	11.80	34.74	0.91	2.27				160	0.33
109	12.60	34.826	0.90	2.25				168	200	11.59	34.80	0.94	2.28				151	0.40
149	11.80	34.740	0.91	2.27				159	250	11.33	34.80	0.82	2.36				147	0.48
198	11.58	34.803	0.94	2.28				151	300	10.67	34.76	0.20	2.60				138	0.55
249	11.23	34.789	0.73	2.39				146	400	9.59	34.70	0.26	2.88				125	0.68
298	10.69	34.761	0.19	2.59				138	500	8.37	34.63	0.13	3.11				111	0.80
399	9.60	34.703	0.26	2.88				125	600	7.10	34.60	0.08	3.24				97	0.90
549	7.70	34.614	0.07	3.20				104	700	6.15	34.58	0.13	3.27				86	0.99
749	5.78	34.575	0.18	3.28				81	800	5.52	34.58	0.22	3.30				79	1.08
949	4.86	34.570	0.32	3.36				72	1000	4.65	34.57	0.39	3.36				69	1.22
1149	4.02	34.588	0.77	3.35				61										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; November 16, 1959; 1153 GCT; 7°55'N, 87°53'W; sounding, 1900 fm; wind, 240°, 2 kt; weather, partly cloudy; sea, slight; wire angle, 13°.																		
0	26.10	34.012	3.79	0.93				556	0	26.10	34.01	3.79	0.93				557	0.00
10	22.43	34.278	2.93	1.23				433	10	22.43	34.28	2.93	1.23				433	0.05
19	15.61	34.823	1.03	2.00				228	20	15.58	34.82	1.02	2.01				227	0.08
29	14.96	34.834	0.75	2.12				214	30	14.80	34.83	0.73	2.13				210	0.10
39	14.23	34.835	0.52	2.18				199	50	13.63	34.82	0.38	2.30				188	0.14
48	13.72	34.823	0.36	2.30				190	75	13.14	34.83	0.47	2.31				177	0.19
63	13.37	34.843	0.45	2.30				181	100	12.81	34.85	0.49	2.27				170	0.23
82	13.00	34.832	0.48	2.31				175	150	12.25	34.83	0.80	2.18				161	0.32
106	12.76	34.852	0.49	2.25				169	200	11.81	34.81	0.84	2.18				154	0.39
145	12.30	34.829	0.79	2.18				162	250	11.59	34.79	0.65	2.40				151	0.47
193	11.86	34.814	0.86	2.16				155	300	11.05	34.77	0.58	2.41				144	0.54
240	11.65	34.805	0.66	2.40				152	400	9.82	34.71	0.40	2.73				127	0.68
288	11.18	34.770	-	2.39				146	500	8.55	34.66	0.13	2.93				113	0.80
383	10.03	34.717	0.45	2.69				131	600	7.30	34.62	0.11	3.09				97	0.91
529	8.13	34.644	0.08	2.97				107	700	6.30	34.60	0.19	3.22				86	1.00
726	6.02	34.601	0.24	3.24				82	800	5.51	34.59	0.38	3.27				77	1.08
925	4.80	34.577	0.63	3.29				70	1000	4.54	34.58	0.72	3.29				67	1.22
1125	4.06	34.592	0.86	3.28				62										
SPENCER F. BAIRD; November 16, 1959; 1602 GCT; 7°35'N, 87°29'W; sounding, 1800 fm; wind, 280°, 1 kt; weather, partly cloudy; sea, smooth; wire angle, 18°.																		
0	26.33	33.301	4.37	0.60				614	0	26.33	33.30	4.37	0.60				615	0.00
9	25.67	33.407	4.20	0.75				587	10	25.60	33.43	4.17	0.76				583	0.06
19	21.31	34.376	3.08	1.24				396	20	20.55	34.46	2.95	1.31				370	0.11
28	17.71	34.702	2.30	1.57				284	30	17.40	34.74	2.18	1.63				274	0.14
38	16.28	34.842	1.62	1.84				242	50	15.23	34.86	1.51	1.96				218	0.19
47	15.47	34.846	1.53	1.95				223	75	14.24	34.91	1.24	2.05				194	0.24
61	14.63	34.873	1.49	1.98				204	100	13.71	34.93	0.93	2.15				181	0.29
80	14.09	34.918	1.12	2.09				190	150	13.01	34.90	0.77	2.22				170	0.37
103	13.66	34.926	0.89	2.16				180	200	12.30	34.86	0.59	2.26				160	0.46
139	13.16	34.905	0.82	2.22				173	250	11.56	34.80	0.52	2.46				151	0.54
185	12.54	34.871	0.59	2.20				163	300	11.08	34.77	0.37	2.52				144	0.61
230	11.78	34.821	0.58	2.45				153	400	9.73	34.70	0.13	2.93				126	0.74
275	11.32	34.780	0.41	2.46				148	500	8.17	34.65	0.07	3.13				107	0.86
370	10.22	34.721	0.18	2.80				134	600	7.01	34.60	0.05	3.20				95	0.96
514	7.97	34.636	0.07	3.15				105	700	6.13	34.58	0.03	3.23				86	1.05
712	6.01	34.578	0.03	3.23				85	800	5.48	34.58	0.32	3.23				77	1.13
911	4.88	34.576	0.60	3.24				71	1000	4.48	34.58	0.70	3.24				67	1.23
1110	4.09	34.591	0.77	3.24				62										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 16, 1959; 2037 GCT; 7°13'N, 87°11'W; sounding, 1700 fm; wind, 250°, 2 kt; weather, partly cloudy; sea, smooth; wire angle, 33°.																		
0	26.82	33.410	4.32	0.56	1.5	0.06	1.8	621	0	26.82	33.41	4.32	0.56	1.5	0.06	1.8	621	0.00
8	26.23	33.400	4.13	0.58	1.8	0.07	5.0	604	10	26.15	33.40	4.12	0.60	1.8	0.08	5.2	601	0.06
16	25.35	33.582	4.03	0.71	2.1	0.11	-	565	20	21.10	34.65	3.01	1.26	6.8	0.11	13.9	370	0.11
24	20.33	34.675	2.79	1.33	7.1	0.31	15.8	349	30	18.92	34.69	2.46	1.43	8.5	0.30	18.7	314	0.14
32	18.66	34.687	2.41	1.44	8.8	0.29	-	307	50	16.10	34.69	1.76	1.81	17.2	1.01	24.2	249	0.20
39	17.53	34.703	2.30	1.57	11.2	0.29	20.6	280	75	14.37	34.81	1.39	2.03	23.2	0.05	35.0	203	0.26
51	15.98	34.687	1.73	1.84	17.8	1.01	25.0	246	100	13.97	34.89	1.06	2.10	23.6	0.04	36.5	190	0.31
66	14.67	34.785	1.48	2.03	21.6	0.07	-	212	150	13.43	34.91	0.86	2.13	23.8	0.06	38.0	177	0.40
84	14.20	34.833	1.33	2.03	23.8	0.04	30.2	198	200	12.92	34.90	0.76	2.26	26.8	0.04	39.3	169	0.48
114	13.78	34.916	0.91	2.13	23.6	0.05	-	183	250	12.22	34.86	0.62	2.35	30.2	0.03	40.0	159	0.57
152	13.41	34.914	0.85	2.13	-	-	-	177	300	11.43	34.79	0.45	2.52	33.2	0.02	40.2	149	0.64
189	13.02	34.902	0.77	2.25	26.0	0.04	39.0	170	400	9.77	34.70	0.06	2.87	39.5	0.03	40.7	127	0.78
224	12.60	34.881	0.68	2.29	-	-	-	164	500	8.00	34.62	0.06	3.07	58.0	0.06	41.7	107	0.90
294	11.53	34.799	0.46	2.50	-	-	-	150	600	6.93	34.59	0.18	3.19	63.8	0.07	42.2	94	1.00
405	9.62	34.702	0.05	2.89	40.6	0.03	40.8	126	700	6.14	34.58	0.39	3.29	67.1	0.03	42.7	86	1.09
569	7.22	34.605	0.09	3.14	62.6	0.07	-	98	800	5.53	34.57	0.52	3.29	72.1	0.02		79	1.17
748	5.83	34.571	0.47	3.30	69.0	0.02	42.6	82										
940	4.93	34.583	0.70	3.25	83.2	0.05	-	71										
SPENCER F. BAIRD; November 17, 1959; 0232 GCT; 6°45'N, 86°44'W; sounding, >1600 fm; wind, 260°, 5 kt; weather, cloudy; sea, slight; wire angle, 00°.																		
0	26.98	32.756	4.34	0.37					672	0	26.98	32.76	4.34	0.37			672	0.00
10	26.82	32.940	3.85	0.40					655	10	26.82	32.94	3.85	0.40			655	0.07
20	26.71	33.184	4.19	0.45					634	20	26.71	33.18	4.19	0.45			634	0.13
30	22.32	34.523	3.18	1.04					412	30	22.32	34.52	3.18	1.04			412	0.18
40	18.80	34.698	2.47	1.44					310	50	16.47	34.80	1.60	1.90			249	0.25
49	16.51	34.800	1.61	1.89					250	75	15.20	34.91	1.33	1.96			213	0.31
64	15.76	34.890	1.53	1.94					227	100	14.25	34.93	1.21	2.02			192	0.36
84	14.74	34.920	1.21	1.97					203	150	13.37	34.92	0.72	2.24			176	0.45
109	14.02	34.930	1.21	2.06					188	200	12.79	34.90	0.61	2.30			166	0.53
148	13.40	34.916	0.74	2.23					176	250	12.01	34.86	0.48	2.48			155	0.62
198	12.83	34.896	0.62	2.28					167	300	11.55	34.81	0.24	2.58			150	0.69
249	12.02	34.856	0.49	2.48					155	400	9.60	34.69	0.08	2.93			126	0.83
299	11.56	34.806	0.24	2.58					150	500	8.08	34.62	0.09	3.15			108	0.95
398	9.66	34.693	0.08	2.91					127	600	6.94	34.60	0.21	3.21			94	1.05
548	7.50	34.611	0.11	3.21					101	700	6.12	34.58	0.45	3.20			85	1.14
748	5.82	34.577	0.54	3.20					82	800	5.53	34.58	0.64	3.22			78	1.22
948	4.97	34.573	0.81	3.25					73	1000	4.79	34.57	0.87	3.26			70	1.37
1149	4.29	34.601	0.95	3.27					63									

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 17, 1959; 2338 GCT; 10°29'N, 87°10'W; sounding, 2115 fm; wind, 340°, 4 kt; weather, partly cloudy; sea, slight; wire angle, 13°.																		
0	27.10	33.606	4.37	0.62	1.0	0.07	4.8	615	0	27.10	33.61	4.37	0.62	1.0	0.07	4.8	616	0.00
10	27.00	33.626	4.08	0.69	0.5	0.03	3.8	611	10	27.00	33.63	4.08	0.69	0.5	0.03	3.8	611	0.06
20	22.50	34.421	3.05	1.16	-	-	-	425	20	22.50	34.42	3.05	1.16	1.8	0.01	7.6	424	0.11
30	18.37	34.694	2.07	1.57	6.0	0.28	18.6	300	30	18.37	34.69	2.07	1.57	6.0	0.28	18.6	300	0.15
40	16.85	34.754	1.69	1.85	11.2	0.64	24.8	261	50	15.88	34.79	1.39	1.91	15.1	0.20	27.2	237	0.20
49	15.93	34.787	1.42	1.91	15.3	0.22	27.0	238	75	14.81	34.91	1.03	2.02	17.1	0.06	31.2	205	0.26
64	15.26	34.907	1.16	1.91	15.5	0.08	28.1	215	100	13.93	34.90	1.16	2.05	16.5	0.02	30.0	188	0.31
84	14.46	34.912	0.94	2.09	17.6	0.04	30.8	198	150	13.32	34.91	0.78	2.14	20.0	0.03	31.7	176	0.40
108	13.74	34.900	1.22	2.04	16.3	0.02	30.2	184	200	12.73	34.88	0.80	2.13	24.1	0.06	34.1	167	0.48
148	13.34	34.911	0.78	2.14	19.8	0.03	31.7	176	250	12.25	34.85	0.68	2.28	26.0	0.07	35.8	159	0.57
198	12.76	34.884	0.81	2.13	-	0.06	-	167	300	11.62	34.80	0.74	2.29	26.3	0.04	37.5	151	0.64
247	12.28	34.864	0.68	2.28	-	-	-	159	400	10.40	34.74	0.22	2.66	31.8	0.04	35.2	135	0.79
297	11.64	34.795	0.75	2.28	26.2	0.04	-	152	500	8.55	34.65	0.08	3.16	33.5	0.54	29.4	113	0.91
396	10.48	34.748	0.23	2.63	31.8	0.03	35.4	136	600	7.20	34.60	0.05	3.29	37.0	0.63	30.5	97	1.01
546	7.80	34.617	0.05	3.27	34.6	0.78	28.6	104	700	6.39	34.58	0.06	3.30	42.5	0.31	35.8	88	1.11
746	6.10	34.576	0.06	3.30	-	-	-	85	800	5.74	34.57	0.08	3.31	48.3	0.15	40.9	81	1.19
946	4.88	34.574	0.23	3.34	59.6	0.03	47.0	72	1000	4.62	34.58	0.34	3.37	66.0	0.02	48.2	79	1.35
1146	4.04	34.590	0.54	3.40	88.6	0.01	50.8	62										
SPENCER F. BAIRD; November 18, 1959; 0405 GCT; 10°03'N, 87°24'W; sounding, >1600 fm; wind, 360°, 13 kt; weather, partly cloudy; sea, moderate; wire angle, 10°.																		
0	27.00	33.853	4.39	0.88				595	0	27.00	33.85	4.39	0.88				596	0.00
10	26.98	33.857	4.16	0.93				594	10	26.98	33.86	4.16	0.93				593	0.06
20	22.08	34.464	3.02	1.22				411	20	22.08	34.46	3.02	1.22				410	0.11
29	18.73	34.678	2.14	1.66				310	30	18.50	34.70	2.08	1.68				303	0.15
39	16.91	34.788	1.85	1.78				259	50	15.70	34.74	1.66	1.90				238	0.20
49	15.74	34.744	1.67	1.89				237	75	14.14	34.78	1.37	2.10				201	0.25
63	14.97	34.792	1.43	2.03				217	100	13.70	34.83	0.99	2.14				189	0.30
82	13.80	34.769	1.30	2.12				195	150	13.05	34.88	0.77	2.27				172	0.39
106	13.65	34.859	0.97	2.15				186	200	12.54	34.89	0.54	2.31				161	0.48
144	13.11	34.879	0.79	2.27				173	250	11.89	34.83	0.33	2.53				154	0.55
192	12.66	34.887	0.61	2.27				164	300	11.07	34.78	0.19	2.61				143	0.63
240	12.03	34.835	0.36	2.52				156	400	9.23	34.69	0.08	3.03				120	0.76
288	11.27	34.794	0.21	2.57				146	500	7.82	34.64	0.13	3.20				103	0.87
384	9.48	34.703	0.07	2.98				123	600	6.90	34.60	0.13	3.31				93	0.97
527	7.43	34.627	0.13	3.25				98	700	6.14	34.58	0.12	3.36				85	1.06
717	6.03	34.582	0.12	3.37				84	800	5.53	34.58	0.31	3.35				78	1.14
910	4.99	34.587	0.54	3.34				71	1000	4.60	34.59	0.72	3.32				67	1.29
1099	4.28	34.596	0.87	3.29				63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m

SPENCER F. BAIRD; November 18, 1959; 0804, 0903 GCT; 9°36'N, 87°37'W; sounding, 1700 fm; wind, 030°, 10 kt; weather, partly cloudy; sea, rough; wire angle, 20°, 17°.

0	26.63	33.890	4.32	0.89	581	0	26.63	33.89	4.32	0.89	581	0.00
8	25.36	34.047	4.02	0.94	532	10	24.60	34.14	3.83	0.95	504	0.05
17	21.24	34.489	3.06	1.19	586	20	21.00	34.52	2.98	1.25	377	0.10
26	20.50	34.581	2.84	1.34	361	30	19.50	34.66	2.42	1.50	329	0.13
35	18.46	34.720	1.90	1.68	300	50	16.95	34.75	1.45	1.92	263	0.19
44	17.57	34.745	1.62	1.81	277	75	14.80	34.80	1.09	2.09	214	0.25
57	16.27	34.736	1.30	2.02	249	100	14.17	34.91	0.83	2.14	192	0.30
74	14.85	34.788	1.10	2.08	215	150	13.50	34.91	0.59	2.21	179	0.40
94	14.26	34.900	0.89	2.12	195	200	12.45	34.87	0.38	2.52	161	0.48
127	13.92	34.924	0.70	2.22	186	250	10.75	34.80	0.33	2.61	137	0.56
166	13.15	34.905	0.51	2.20	173	300	9.50	34.72	0.09	2.97	122	0.62
204	12.37	34.873	0.36	2.53	160	400	7.98	34.64	0.12	3.17	106	0.73
242	10.98	34.814	0.25	2.57	140	500	7.22	34.62	0.20	3.25	96	0.83
317	9.18	34.702	0.08	3.04	119	600	6.66	34.60	0.26	3.29	90	0.93
426	7.73	34.626	0.13	-	103	700	5.93	34.58	0.33	3.34	83	1.01
569	6.89	34.610	0.23	-	93	800	5.43	34.58	0.36	3.35	77	1.09
711	5.84	34.585	0.34	-	82	1000	4.51	34.59	0.79	3.32	66	1.24
844	5.23	34.583	0.39	-	75							
748a)	5.72	34.583	0.34	3.34	80							
936	4.79	34.581	0.52	3.36	70							
1126	4.15	34.596	1.10	3.28	62							
1321	3.55	34.602	1.04	3.29	56							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 18, 1959; 1254 GCT; 9°03'N, 87°50.5'W; sounding, 1750 fm; wind, 020°, 7 kt; weather, cloudy; sea, moderate; wire angle, 26°.																		
0	26.76	33.872	4.02	0.85				586	0	26.76	33.87	4.02	0.85				587	0.00
9	23.05	34.359	3.27	1.05				444	10	21.84	34.46	2.84	1.14				403	0.05
18	18.87	34.637	1.80	1.49				316	20	18.23	34.66	1.68	1.59				299	0.08
26	16.80	34.737	1.39	1.86				260	30	16.40	34.77	1.25	1.91				249	0.11
35	15.83	34.801	1.10	1.98				235	50	14.75	34.76	1.04	2.03				215	0.16
44	15.13	34.773	1.06	2.05				222	75	14.12	34.88	0.86	2.16				193	0.21
57	14.30	34.761	1.00	2.03				206	100	13.53	34.86	0.82	2.14				183	0.26
74	14.13	34.881	0.86	2.16				194	150	12.60	34.85	0.62	2.26				166	0.34
96	13.60	34.857	0.84	2.13				184	200	11.88	34.82	0.51	2.39				155	0.42
129	12.94	34.863	0.66	2.26				172	250	11.23	34.79	0.22	2.64				146	0.50
172	12.25	34.839	0.57	2.26				160	300	10.39	34.74	0.13	2.79				135	0.57
213	11.70	34.812	0.47	2.45				152	400	8.66	34.66	0.10	2.98				113	0.69
257	11.16	34.784	0.21	2.66				145	500	7.50	34.62	0.10	3.12				100	0.80
342	9.68	34.711	0.11	2.87				126	600	6.72	34.60	0.12	3.24				91	0.90
474	7.75	34.625	0.09	3.09				104	700	6.07	34.58	0.14	3.34				85	0.98
652	6.40	34.593	0.13	3.28				88	800	5.47	34.57	0.19	3.42				78	1.06
838	5.21	34.573	0.24	3.44				75	1000	4.50	34.58	0.67	3.40				67	1.21
1032	4.39	34.586	0.78	3.39				65										
SPENCER F. BAIRD; November 18, 1959; 1632 GCT; 8°35'N, 88°00.5'W; sounding, 1800 fm; wind, 030°, 3 kt; weather, cloudy; sea, smooth; wire angle, 05°.																		
0	27.19	33.574	-	0.72	2.2	0.10	5.0	621	0	27.19	33.57		0.72	2.2	0.10	5.0	621	0.00
10	23.62	34.134	3.34	1.03	5.8	0.12	10.0	476	10	23.62	34.13	3.34	1.03	5.8	0.12	10.0	487	0.06
20	17.00	34.705	1.28	1.70	14.8	0.58	25.0	268	20	17.00	34.70	1.28	1.70	14.8	0.58	25.0	268	0.09
30	15.54	34.722	0.91	1.92	18.0	0.61	27.5	234	30	15.54	34.72	0.91	1.92	18.0	0.61	27.5	234	0.12
40	15.15	34.878	0.72	1.91	-	0.04	19.8	214	50	14.40	34.81	1.10	1.87	19.0	0.05	27.8	204	0.16
50	14.40	34.814	1.10	1.87	19.0	0.05	27.8	204	75	13.67	34.85	0.81	2.07	20.2	0.03	26.1	186	0.21
65	13.92	34.857	0.81	2.05	20.2	0.03	28.5	191	100	13.20	34.87	0.78	2.09	20.2	0.02	29.3	176	0.26
85	13.44	34.841	0.81	2.08	20.4	-	25.6	183	150	12.45	34.85	0.55	2.26	23.7	0.01	27.5	163	0.34
109	13.06	34.873	0.76	2.10	20.4	0.02	31.2	173	200	11.75	34.82	0.33	2.25	26.4	0.00	30.0	152	0.42
149	12.46	34.850	0.56	2.26	23.8	0.01	28.5	163	250	11.11	34.77	0.32	2.45	27.5	0.01	30.0	145	0.49
199	11.78	34.816	0.33	2.25	-	-	-	153	300	10.67	34.75	0.00	2.56	29.3	0.07	28.9	139	0.56
249	11.12	34.773	0.32	2.44	27.4	0.01	30.0	145	400	9.28	34.67	0.00	2.95	42.3	1.08	27.0	122	0.70
299	10.68	34.746	0.00	2.55	-	-	-	139	500	7.82	34.60	0.00	2.95	48.0	0.43	30.8	106	0.81
398	9.31	34.672	0.00	2.95	42.0	1.09	-	123	600	6.72	34.58	0.01	3.06	62.4	0.14	40.2	93	0.91
549	7.27	34.594	0.00	2.95	51.8	0.25	34.2	99	700	5.96	34.57	0.04	3.10	73.6	0.05	50.0	83	1.00
749	5.65	34.570	0.09	3.14	76.4	0.04	52.6	80	800	5.36	34.57	0.15	3.17	78.5	0.03	53.9	77	1.08
950	4.66	34.577	0.34	3.20	82.4	0.02	53.4	68	1000	4.47	34.58	0.48	3.19	83.5	0.02	51.9	67	1.22
1150	3.96	34.594	0.86	3.14	87.2	0.04	44.7	61										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; November 19, 1959; 0408 GCT; 8°28.5'N, 88°59'W; sounding, 1850 fm; wind, 050°, 4 kt; weather, partly cloudy; sea, slight; wire angle, 14°.																		
0	26.85	33.647	4.36	0.71				605	0	26.85	33.65	4.36	0.71				605	0.00
10	23.70	34.091	4.10	0.89				481	10	23.70	34.09	4.10	0.89				481	0.05
19	17.86	34.793	1.37	1.84				281	20	17.84	34.79	1.36	1.86				231	0.09
29	16.82	34.840	1.22	2.06				254	30	16.60	34.84	1.15	2.09				249	0.11
38	15.27	34.805	0.74	2.25				223	50	14.26	34.83	0.39	2.36				199	0.16
48	14.40	34.833	0.39	2.32				203	75	13.42	34.87	0.70	2.29				180	0.21
63	13.57	34.829	0.41	2.43				186	100	13.19	34.90	0.78	2.25				173	0.25
83	13.35	34.882	0.91	2.26				178	150	12.62	34.88	0.69	2.37				164	0.33
107	13.10	34.897	0.76	2.25				172	200	12.11	34.84	0.69	2.31				157	0.41
146	12.69	34.885	0.69	2.37				165	250	11.50	34.79	0.51	2.48				150	0.49
195	12.19	34.848	0.69	2.30				158	300	10.97	34.76	0.74	2.38				143	0.56
244	11.60	34.805	0.49	2.49				152	400	9.83	34.71	0.65	2.72				128	0.70
293	11.01	34.762	0.74	2.38				144	500	8.54	34.66	0.18	3.07				112	0.82
391	9.98	34.716	0.68	2.68				130	600	7.42	34.62	0.12	3.23				99	0.93
539	8.10	34.636	0.08	3.14				107	700	6.43	34.59	0.19	3.27				88	1.02
736	6.15	34.586	0.22	3.28				85	800	5.73	34.58	0.23	3.32				80	1.10
935	4.96	34.571	0.36	3.42				73	1000	4.66	34.57	0.46	3.40				69	1.25
1133	4.15	34.583	0.63	3.35				63										
SPENCER F. BAIRD; November 19, 1959; 0822 GCT; 8°09.5'N, 89°29'W; sounding, 1850 fm; wind, calm; weather, partly cloudy; sea, smooth; wire angle, 22°.																		
0	26.36	33.567	4.08	0.70				596	0	26.36	33.57	4.08	0.70				596	0.00
10	18.50	34.667	2.12	1.65				304	10	18.50	34.67	2.12	1.65				305	0.05
19	16.11	34.821	1.57	1.81				239	20	16.08	34.82	1.56	1.82				239	0.07
29	15.49	34.942	1.21	2.00				217	30	15.47	34.95	1.21	2.00				217	0.10
38	15.12	34.955	1.23	1.99				208	50	14.72	34.96	1.18	2.01				200	0.14
47	14.83	34.957	1.20	2.01				202	75	14.07	34.93	1.08	2.15				188	0.19
61	14.40	34.945	1.12	2.03				195	100	13.78	34.93	0.96	2.13				185	0.23
79	14.00	34.934	1.05	2.15				187	150	13.14	34.91	0.72	2.27				172	0.32
102	13.76	34.930	0.95	2.12				182	200	12.64	34.87	0.62	2.32				165	0.41
138	13.27	34.918	0.77	2.26				174	250	12.15	34.85	0.62	2.39				158	0.49
183	12.83	34.893	0.60	2.28				167	300	11.53	34.82	0.50	2.44				149	0.56
228	12.32	34.852	0.65	2.38				161	400	10.03	34.71	0.48	2.75				132	0.70
273	11.90	34.844	0.48	2.41				154	500	8.60	34.65	0.11	3.06				113	0.83
362	10.61	34.746	0.60	2.59				138	600	7.39	34.62	0.14	3.15				99	0.93
502	8.56	34.648	0.11	3.06				113	700	6.48	34.58	0.23	3.22				89	1.03
693	6.51	34.586	0.22	3.21				89	800	5.82	34.57	0.33	3.31				82	1.11
885	5.32	34.572	0.44	3.33				76	1000	4.77	34.58	0.60	3.34				70	1.26
1081	4.36	34.587	0.71	3.35				65										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 19, 1959; 1210 GCT; 7°50.5'N, 89°57'W; sounding, 1800 fm; wind, 300°, 7 kt; weather, partly cloudy; sea, slight; wire angle, 03°.																		
0	25.86	34.076	4.06	1.08				544	0	25.86	34.08	4.06	1.08				544	0.00
10	24.85	34.119	3.79	1.22				512	10	24.85	34.12	3.79	1.22				512	0.05
20	17.30	34.784	1.84	1.76				269	20	17.30	34.78	1.84	1.76				269	0.09
30	15.68	34.798	1.44	1.96				232	30	15.68	34.80	1.44	1.96				231	0.12
40	15.02	34.918	1.25	2.07				209	50	14.73	34.93	1.21	2.03				202	0.16
50	14.73	34.928	1.21	2.03				202	75	14.00	34.91	1.06	2.17				188	0.21
65	14.22	34.904	1.14	2.12				194	100	13.62	34.92	0.94	2.20				180	0.25
85	13.78	34.917	1.00	2.19				184	150	13.02	34.91	0.81	2.30				170	0.34
110	13.51	34.922	0.89	2.22				178	200	12.50	34.88	0.79	2.30				162	0.43
150	13.02	34.912	0.81	2.30				170	250	11.83	34.83	0.52	2.51				153	0.50
200	12.50	34.880	0.79	2.30				162	300	11.17	34.78	0.40	2.58				145	0.58
250	11.83	34.828	0.52	2.51				153	400	9.89	34.72	0.12	2.96				129	0.72
300	11.17	34.780	0.40	2.58				146	500	8.51	34.67	0.13	3.16				111	0.84
400	9.89	34.720	0.12	2.96				128	600	7.15	34.62	0.20	3.30				95	0.94
550	7.70	34.640	0.14	3.25				101	700	6.20	34.59	0.33	3.38				86	1.03
750	5.92	34.581	0.36	3.39				82	800	5.63	34.58	0.43	3.40				79	1.11
950	4.94	34.581	0.58	3.42				72	1000	4.73	34.58	0.66	3.41				69	1.26
1150	4.15	34.598	0.92	3.35				62										
SPENCER F. BAIRD; November 19, 1959; 1615 GCT; 7°39'N, 90°12'W; sounding, 1850 fm; wind, 320°, 2 kt; weather, partly cloudy; sea, slight; wire angle, 10°.																		
0	25.80	33.621	4.28	0.89	4.3	0.18	-	576	0	25.80	33.62	4.28	0.89	4.3	0.18		576	0.00
10	22.37	34.092	3.28	1.22	7.0	0.16	12.5	445	10	22.37	34.09	3.28	1.22	7.0	0.16	12.5	444	0.05
20	15.94	34.774	1.67	1.86	-	0.70	27.1	239	20	15.94	34.77	1.67	1.86	10.8	0.70	27.0	238	0.09
29	15.36	34.912	1.49	1.99	15.6	0.28	-	217	30	15.34	34.91	1.48	2.00	15.9	0.28	31.3	217	0.11
39	15.01	34.931	1.03	2.13	-	0.16	-	208	50	14.57	34.91	0.94	2.14	19.2	0.09	31.3	200	0.15
49	14.59	34.906	0.94	2.14	19.2	0.09	31.2	201	75	13.77	34.94	0.93	2.21	18.4	0.05	29.2	182	0.20
64	14.01	34.937	1.12	2.12	17.8	0.10	27.2	187	100	13.36	34.92	0.80	2.24	20.6	0.04	34.8	176	0.24
83	13.61	34.926	0.86	2.23	19.4	0.04	33.8	180	150	12.82	34.90	0.84	2.33	21.5	0.03	33.4	167	0.33
108	13.27	34.916	0.79	2.25	21.0	0.03	33.4	174	200	12.37	34.89	0.44	2.43	21.4	0.04	34.8	159	0.41
146	12.87	34.896	0.86	2.31	21.4	0.03	33.4	167	250	11.87	34.84	0.52	2.56	26.3	0.07	38.0	153	0.49
195	12.42	34.889	0.43	2.41	-	-	-	160	300	11.24	34.79	0.53	2.60	30.5	0.08	41.9	147	0.56
243	11.93	34.838	0.50	2.56	25.2	0.06	37.3	154	400	9.89	34.72	0.25	2.83	43.9	0.07	42.2	128	0.70
292	11.34	34.797	0.54	2.58	-	0.08	-	146	500	8.18	34.64	0.16	3.04	50.0	0.05	42.2	108	0.82
389	10.01	34.722	0.26	2.82	35.2	0.08	-	132	600	6.95	34.60	0.22	3.23	58.6	0.07	44.1	94	0.92
534	7.64	34.634	0.15	3.10	53.6	0.06	42.8	101	700	6.21	34.58	0.36	3.35	65.0	0.06	47.0	86	1.01
729	6.04	34.582	0.40	3.36	66.8	0.05	47.7	84	800	5.64	34.57	0.47	3.40	71.5	0.03	51.4	80	1.09
926	5.05	34.572	0.63	3.44	-	0.02	57.2	74	1000	4.75	34.58	0.71	3.43	83.7	0.02	58.7	70	1.24
1124	4.19	34.589	0.90	3.39	94.2	0.03	54.5	63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 19, 1959; 2354 GCT; 7°17.5'N, 90°30.5'W; sounding, 1850 fm; wind, 340°, 3 kt; weather, partly cloudy; sea, slight; wire angle, 23°.																		
0	26.38	33.915	4.22	0.97				571	0	26.38	33.92	4.22	0.97				571	0.00
9	23.86	34.044	3.54	1.15				490	10	23.37	34.08	3.37	1.22				472	0.05
18	17.52	34.748	1.18	2.01				276	20	16.60	34.75	1.06	2.12				255	0.09
28	14.94	34.754	0.90	2.24				220	30	14.90	34.75	0.87	2.24				219	0.11
37	14.58	34.855	0.62	2.23				203	50	14.09	34.90	1.02	2.18				191	0.15
46	14.20	34.877	0.86	2.19				195	75	13.69	34.92	0.86	2.14				181	0.20
59	13.90	34.922	1.06	2.14				186	100	13.23	34.91	0.77	2.27				173	0.24
77	13.66	34.920	0.84	2.14				181	150	12.66	34.87	0.93	2.25				166	0.33
100	13.23	34.907	0.77	2.27				174	200	12.27	34.86	0.72	2.31				159	0.41
136	12.76	34.872	0.99	2.25				167	250	11.75	34.82	0.79	2.41				152	0.49
182	12.40	34.870	0.71	2.27				161	300	11.05	34.78	0.74	2.51				143	0.56
227	12.04	34.850	0.74	2.40				156	400	9.73	34.71	0.47	2.84				127	0.70
273	11.43	34.803	0.81	2.42				148	500	8.30	34.65	0.24	3.09				110	0.81
365	10.17	34.726	0.54	2.74				132	600	7.11	34.61	0.08	3.26				96	0.92
507	8.17	34.638	0.22	3.11				108	700	6.10	34.58	0.05	3.33				84	1.01
702	6.07	34.579	0.05	3.33				84	800	5.50	34.57	0.30	3.34				78	1.09
901	5.00	34.573	0.62	3.34				73	1000	4.61	34.58	0.80	3.33				68	1.23
1102	4.19	34.588	0.88	3.30				63										
SPENCER F. BAIRD; November 20, 1959; 0346, 0422 GCT; 6°56'N, 90°51'W; sounding, 1800 fm; wind, 010°, 3 kt; weather, partly cloudy; sea, missing; wire angle, 19°, 21°.																		
0	26.80	33.812	3.99	0.92				592	0	26.80	33.81	3.99	0.92				592	0.00
9	21.76	34.305	2.56	1.54				414	10	20.50	34.44	2.15	1.46				370	0.05
18	16.44	34.808	0.94	2.14				247	20	16.05	34.80	0.95	2.18				239	0.08
28	14.45	34.742	1.00	2.24				210	30	14.30	34.74	0.97	2.25				207	0.10
37	13.98	34.792	0.70	2.31				197	50	13.97	34.90	0.51	2.30				189	0.14
46	14.00	34.899	0.51	2.29				189	75	13.36	34.88	0.73	3.34				179	0.19
60	13.61	34.889	0.49	2.35				182	100	13.14	34.90	0.88	2.26				172	0.23
78	13.34	34.879	0.75	2.33				178	150	12.72	34.89	0.60	2.38				166	0.31
101	13.13	34.895	0.88	2.26				172	200	12.14	34.84	0.37	2.52				158	0.40
137	12.84	34.896	0.67	2.36				167	250	11.57	34.82	0.32	2.57				149	0.47
180	12.38	34.863	0.45	2.45				161	300	10.94	34.79	0.29	2.57				141	0.54
224	11.87	34.834	0.31	2.58				154	400	9.63	34.70	0.19	2.73				126	0.68
268	11.39	34.816	0.32	2.56				146	500	8.41	34.64	0.11	3.04				112	0.80
356	10.14	34.716	-	2.61				132	600	7.22	34.60	0.12	3.21				98	0.90
486	8.60	34.653	0.11	3.02				114	700	6.23	34.58	0.27	3.30				87	0.99
672	6.44	34.584	0.18	3.29				89	800	5.63	34.57	0.47	3.32				80	1.08
									1000	4.54	34.58	0.45	3.35				67	1.23
860	5.31	34.572	0.51	3.32				76										
1058	4.19	34.584	0.39	3.36				64										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 20, 1959; 0801 GCT; 6°38'N, 91°09'W; sounding, >1800 fm; wind, 210°, 7 kt; weather, partly cloudy; sea, missing; wire angle, 18°.																		
0	26.98	33.180	3.99	0.52				643	0	26.98	33.18	3.99	0.52				643	0.00
10	26.58	33.428	4.25	0.69				612	10	26.58	33.43	4.25	0.69				612	0.06
19	21.72	34.264	2.50	1.43				415	20	20.57	34.38	2.18	1.57				377	0.11
29	15.88	34.714	1.18	2.05				242	30	15.82	34.71	1.19	2.04				240	0.14
39	15.29	34.853	1.35	1.96				220	50	14.82	34.87	1.41	2.00				207	0.19
48	14.94	34.864	1.42	1.98				212	75	13.95	34.92	1.01	2.18				186	0.24
62	14.34	34.920	1.23	2.09				195	100	13.52	34.92	0.81	2.22				179	0.28
81	13.79	34.923	0.92	2.20				184	150	12.90	34.91	0.59	2.34				167	0.37
105	13.46	34.920	0.78	2.23				177	200	12.40	34.84	0.47	2.42				161	0.45
142	12.98	34.912	0.62	2.34				169	250	11.80	34.84	0.64	2.47				152	0.53
187	12.52	34.878	0.46	2.38				162	300	11.01	34.80	0.69	2.43				141	0.60
232	12.06	34.835	0.51	2.49				157	400	9.50	34.69	0.26	2.89				124	0.73
276	11.36	34.832	0.75	2.37				145	500	8.05	34.63	0.10	3.08				107	0.85
365	10.03	34.718	0.37	2.76				131	600	6.94	34.60	0.12	3.23				94	0.95
501	8.03	34.629	0.10	3.08				107	700	5.99	34.58	0.26	3.30				83	1.04
685	6.11	34.578	0.18	3.31				85	800	5.33	34.57	0.68	3.28				76	1.12
876	4.98	34.572	0.81	3.26				73	1000	4.53	34.58	0.75	3.26				67	1.26
1069	4.32	34.579	0.71	3.26				65										
SPENCER F. BAIRD; November 20, 1959; 1720, 1749, missing GCT; 8°09'N, 91°17'W; sounding, 1865 fm; wind, 340°, 1 kt; weather, partly cloudy; sea, smooth; wire angle, 04°, 08°, missing.																		
0	27.80	34.043	4.36	0.94	2.7	0.11	8.8	606	0	27.80	34.04	4.36	0.94	2.7	0.11	8.8	606	0.00
10	27.04	34.017	4.34	0.95	2.5	0.10	8.2	584	10	27.04	34.02	4.34	0.95	2.5	0.10	8.2	584	0.06
20	17.13	34.765	1.81	1.80	-	-	-	266	20	17.13	34.77	1.81	1.80	15.7		28.8	266	0.10
30	15.20	34.811	0.73	2.27	19.0	0.08	32.0	221	30	15.20	34.81	0.73	2.27	19.0	0.08	32.0	220	0.13
40	14.42	34.821	0.80	2.23	-	-	-	204	50	14.09	34.87	0.52	2.29	20.6	0.09	34.8	194	0.17
50	14.09	34.865	0.52	2.29	20.6	0.09	34.8	194	75	13.20	34.84	0.56	2.32	21.8	0.06	36.8	177	0.21
65	13.49	34.876	0.54	2.33	21.4	0.13	37.0	181	100	12.71	34.84	0.54	2.33	23.0	0.02	37.1	169	0.26
85	12.96	34.830	0.57	2.32	22.0	0.03	36.5	174	150	12.19	34.84	0.49	2.41	57.2	0.06	38.5	160	0.34
110	12.60	34.844	0.52	2.37	23.6	0.03	37.8	167	200	11.77	34.82	0.64	2.39	53.0	0.06	36.6	152	0.42
150	12.19	34.835	0.49	2.41	57.2	0.06	-	159	250	11.06	34.77	0.76	2.45	28.8	0.06	33.6	144	0.49
200	11.77	34.818	0.64	2.39	-	-	-	153	300	10.51	34.75	0.32	2.62	30.3	0.10	35.0	137	0.56
250	11.06	34.770	0.76	2.45	28.8	0.06	33.6	144	400	9.08	34.68	0.11	3.00	43.0	(0.39)	43.0	119	0.69
300	10.51	34.752	0.32	2.62	-	-	-	136	500	7.88	34.63	0.11	3.08	53.4	(0.21)	48.1	105	0.80
400	9.08	34.684	0.11	3.00	-	-	-	119	600	6.93	34.60	0.16	3.17	60.0	0.05	50.3	94	0.90
550	7.32	34.609	0.12	3.12	57.8	0.08	49.8	98	700	6.22	34.59	0.24	3.23	65.8	0.04	50.5	86	0.99
750	5.90	34.588	0.28	3.27	69.0	0.04	-	82	800	5.52	34.58	0.36	3.30	72.2	0.03	50.0	78	1.07
									1000	4.42	34.58	0.59	3.37	85.8	0.02	48.5	66	1.22
950	4.63	34.578	0.52	3.36	82.6	0.03	-	68										
1150	3.92	34.587	0.74	3.39	98.0	0.02	47.4	60										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m

SPENCER F. BAIRD; November 21, 1959; 0501 GCT; 8°10'N, 90°29'W; sounding, 1850 fm; wind, calm; weather, clear; sea, smooth; wire angle, 06°.

0	26.30	33.867	3.99	1.25	573	0	26.30	33.87	3.99	1.25	571	0.00
10	17.61	34.694	1.94	1.82	282	10	17.61	34.69	1.94	1.82	282	0.04
20	15.03	34.796	1.37	1.99	218	20	15.03	34.80	1.37	1.99	218	0.07
29	15.14	34.940	1.39	2.05	210	30	15.13	34.94	1.37	2.05	210	0.09
39	14.80	34.939	1.12	2.05	202	50	14.60	34.93	0.86	2.12	200	0.13
48	14.63	34.934	0.86	2.11	200	75	13.97	34.93	0.75	2.24	187	0.18
63	14.18	34.926	0.91	2.18	191	100	13.46	34.90	0.77	2.20	179	0.22
82	13.82	34.924	0.67	2.27	184	150	12.91	34.88	0.57	2.33	170	0.31
106	13.34	34.900	0.79	2.19	176	200	12.40	34.86	0.67	2.31	161	0.39
144	12.94	34.884	0.57	2.33	170	250	11.70	34.81	0.55	2.46	152	0.47
191	12.51	34.873	0.68	2.30	183	300	10.96	34.77	0.56	2.50	143	0.55
237	11.88	34.824	0.55	2.46	155	400	9.60	34.70	0.14	2.94	125	0.68
285	11.16	34.781	0.59	2.47	145	500	8.16	34.63	0.10	3.02	109	0.80
382	9.82	34.712	0.17	2.93	128	600	6.90	34.60	0.16	3.21	93	0.90
528	7.79	34.620	0.10	3.10	104	700	6.02	34.58	0.28	3.35	83	0.99
725	5.86	34.579	0.32	3.37	82	800	5.45	34.58	0.40	3.37	77	1.07
923	4.94	34.572	0.54	3.37	72	1000	4.68	34.57	0.65	3.35	69	1.21
1122	4.26	34.585	0.88	3.31	64							

SPENCER F. BAIRD; November 21, 1959; 0906 GCT; 8°11'N, 89°48.5'W; sounding, 1850 fm; wind, 260°, 2 kt; weather, partly cloudy; sea, smooth; wire angle, 18°.

0	26.79	33.612	4.40	0.68	606	0	26.79	33.61	4.40	0.68	606	0.00
9	21.75	34.364	3.20	1.33	409	10	18.65	34.62	2.49	1.62	312	0.05
18	16.13	34.856	1.74	1.84	237	20	16.06	34.87	1.70	1.86	234	0.07
28	15.79	34.934	1.50	1.98	224	30	15.76	34.93	1.49	1.98	224	0.10
37	15.56	34.943	1.45	1.96	220	50	15.00	34.95	1.33	2.00	206	0.14
46	15.18	34.950	1.35	2.00	210	75	14.38	34.95	1.29	2.10	193	0.19
60	14.63	34.954	1.32	2.02	199	100	14.11	34.94	1.26	2.08	189	0.24
78	14.31	34.950	1.28	2.11	192	150	13.22	34.92	0.86	2.22	172	0.33
101	14.10	34.944	1.25	2.08	188	200	12.45	34.87	0.52	2.41	161	0.41
137	13.43	34.927	0.98	2.19	176	250	11.79	34.82	0.38	2.50	153	0.49
182	12.73	34.892	0.61	2.31	166	300	11.27	34.80	0.38	2.54	147	0.56
227	12.00	34.840	0.41	2.50	156	400	9.89	34.72	0.31	2.85	128	0.70
272	11.55	34.812	0.37	2.50	150	500	8.30	34.64	0.09	3.12	110	0.82
362	10.53	34.749	0.40	2.72	137	600	7.24	34.61	0.16	3.20	97	0.92
500	8.30	34.644	0.09	3.12	110	700	6.41	34.58	0.22	3.27	89	1.02
687	6.51	34.590	0.21	3.25	89	800	5.78	34.57	0.30	3.36	81	1.10
876	5.37	34.574	0.39	3.38	77	1000	4.81	34.58	0.63	3.35	70	1.25
1072	4.48	34.583	0.79	3.31	67							

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 21, 1959; 1412 GCT; 8°50'N, 89°35'W; sounding, 1900 fm; wind, 290°, 2 kt; weather, cloudy; sea, smooth; wire angle, 18°.																		
0	27.24	33.702	4.00	0.72				613	0	27.24	33.70	4.00	0.72				613	0.00
9	27.23	33.702	4.08	0.72				613	10	27.22	33.70	4.08	0.72				613	0.06
19	19.74	34.652	1.82	1.66				336	20	19.35	34.68	1.83	1.68				324	0.11
29	16.34	34.815	1.88	1.84				244	30	16.15	34.82	1.87	1.85				240	0.14
38	15.34	34.851	1.61	1.95				221	50	14.80	34.93	1.02	2.13				203	0.18
48	14.87	34.920	1.09	2.11				206	75	14.04	34.90	0.75	2.25				190	0.23
62	14.41	34.946	0.75	2.22				194	100	13.55	34.93	0.78	2.28				178	0.28
81	13.90	34.898	0.76	2.27				187	150	13.03	34.91	0.61	2.36				170	0.36
105	13.48	34.928	0.77	2.28				177	200	12.55	34.87	0.46	2.41				163	0.45
140	13.12	34.921	0.63	2.36				171	250	11.98	34.83	0.45	2.50				156	0.53
184	12.70	34.883	0.49	2.37				166	300	11.20	34.79	0.48	2.45				146	0.60
227	12.26	34.852	0.42	2.53				160	400	9.85	34.71	0.18	2.82				128	0.74
272	11.64	34.809	0.54	2.44				152	500	8.56	34.65	0.07	3.18				113	0.85
362	10.33	34.739	0.25	2.62				134	600	7.45	34.60	0.07	3.25				101	0.96
500	8.56	34.648	0.07	3.18				113	700	6.47	34.58	0.12	3.29				89	1.05
685	6.60	34.582	0.10	3.29				91	800	5.75	34.58	0.21	3.35				80	1.14
874	5.33	34.578	0.28	3.40				76	1000	4.73	34.58	0.42	3.44				69	1.29
1069	4.43	34.582	0.50	3.46				66										
SPENCER F. BAIRD; November 21, 1959; 1958 GCT; 8°10'N, 89°05'W; sounding, 1860 fm; wind, 220°, 1 kt; weather, cloudy; sea, smooth; wire angle, 20°.																		
0	27.59	33.770	4.36	0.62	1.4	0.07	4.2	619	0	27.59	33.77	4.36	0.62	1.4	0.07	4.2	619	0.00
9	20.21	34.672	3.49	1.10	0.3	0.22	6.6	347	10	19.90	34.69	3.37	1.16	1.2	0.22	7.0	338	0.05
19	17.75	34.778	1.44	1.79	15.0	0.18	-	279	20	17.46	34.80	1.29	1.87	16.7	0.17	19.1	271	0.08
28	16.30	34.823	0.95	2.04	15.6	0.10	27.3	244	30	15.93	34.81	0.93	2.04	15.8	0.09	29.6	236	0.10
38	15.22	34.798	0.91	2.04	18.8	0.07	-	222	50	14.70	34.83	0.77	2.10	19.2	0.06	30.5	209	0.15
47	14.84	34.817	0.82	2.07	18.9	0.06	31.0	212	75	13.45	34.80	0.73	2.19	20.4	0.02	32.7	185	0.20
61	14.17	34.831	0.68	2.14	20.8	0.07	28.5	198	100	12.82	34.80	0.71	2.23	25.0	0.03	35.3	174	0.24
80	13.23	34.799	0.74	2.20	20.4	0.02	34.3	182	150	12.20	34.82	0.76	2.24	24.6	0.03	33.0	161	0.33
104	12.76	34.795	0.71	2.23	25.6	0.03	35.2	173	200	11.72	34.81	0.83	2.17	25.0	0.02	32.2	153	0.40
142	12.28	34.818	0.74	2.25	24.8	0.03	33.0	162	250	11.23	34.79	0.79	2.36		0.01		146	0.48
189	11.81	34.810	0.83	2.17	-	-	-	154	300	10.73	34.76	0.57	2.45				139	0.55
236	11.39	34.797	0.84	2.32	26.6	0.01	33.0	148	400	9.61	34.70	0.32	2.78				125	0.68
282	10.92	34.766	0.61	2.40	-	-	-	142	500	8.40	34.64	0.10	3.00				112	0.80
373	9.91	34.717	0.38	2.69	-	-	-	129	600	7.26	34.61	0.13	3.04				98	0.91
512	8.23	34.634	0.09	3.03	-	-	-	110	700	6.35	34.59	0.20	3.06	73.4	0.00	48.6	87	1.00
701	6.34	34.590	0.20	3.06	73.4	0.00	48.8	87	800	5.63	34.58	0.24	3.20	83.1	0.00	51.0	80	1.08
891	5.08	34.573	0.33	3.32	87.6	0.00	51.0	74	1000	4.55	34.58	0.59	3.29	90.1	0.00	50.0	67	1.23
1085	4.28	34.583	0.88	3.26	91.4	0.00	49.2	65										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m

SPENCER F. BAIRD; November 22, 1959; 0327 GCT; 8°09.5'N, 88°27.5'W; sounding, 1850 fm; wind, 200°, 7 kt; weather, partly cloudy; sea, slight; wire angle, 06°.

0	26.96	33.745	3.91	0.79	601	0	26.96	33.75	3.91	0.79	601	0.00
10	22.87	34.199	2.21	1.20	451	10	22.87	34.20	2.21	1.20	450	0.05
20	17.74	34.717	1.77	1.64	283	20	17.74	34.72	1.77	1.64	283	0.09
30	16.65	34.824	1.20	1.95	251	30	16.65	34.82	1.20	1.95	251	0.12
40	15.96	34.901	0.87	2.02	230	50	14.94	34.78	1.15	2.02	218	0.16
50	14.94	34.783	1.15	2.02	217	75	13.83	34.84	0.50	2.28	190	0.21
65	14.30	34.823	0.74	2.19	201	100	13.10	34.85	0.57	2.28	175	0.26
85	13.44	34.853	0.40	2.33	182	150	11.97	34.79	0.85	2.27	159	0.34
109	12.90	34.850	0.69	2.22	172	200	11.54	34.79	0.85	2.28	151	0.42
149	11.98	34.792	0.85	2.27	159	250	11.16	34.78	0.50	2.48	145	0.49
200	11.54	34.789	0.85	2.28	151	300	10.69	34.75	0.47	2.51	140	0.57
250	11.16	34.777	0.50	2.48	145	400	9.51	34.68	0.10	2.96	125	0.70
299	10.70	34.750	0.47	2.51	140	500	8.30	34.63	0.09	3.07	111	0.82
399	9.52	34.684	0.10	2.95	125	600	7.17	34.60	0.11	3.16	97	0.92
548	7.72	34.612	0.09	3.10	104	700	6.28	34.59	0.18	3.27	87	1.01
748	5.94	34.588	0.22	3.32	82	800	5.60	34.58	0.27	3.35	79	1.09
947	4.88	34.573	0.38	3.39	72	1000	4.63	34.58	0.47	3.38	69	1.24
1148	4.06	34.586	0.66	3.33	62							

SPENCER F. BAIRD; November 22, 1959; 0951 GCT; 7°25'N, 88°07'W; sounding, 1850 fm; wind, 200°, 5 kt; weather, partly cloudy; sea, smooth; wire angle, 12°.

0	25.35	33.652	4.24	0.89	560	0	25.35	33.65	4.24	0.89	560	0.00
10	21.03	34.317	3.05	1.33	393	10	21.03	34.32	3.05	1.33	393	0.05
20	17.77	34.770	2.09	1.67	280	20	17.77	34.77	2.09	1.67	280	0.08
30	16.90	34.789	1.98	1.81	259	30	16.90	34.79	1.98	1.81	259	0.11
40	15.93	34.888	1.61	1.90	230	50	15.40	34.90	1.53	1.95	219	0.16
49	15.46	34.898	1.55	1.94	220	75	14.27	34.90	1.15	2.15	193	0.21
64	14.60	34.889	1.17	2.10	202	100	13.69	34.90	1.05	2.18	182	0.25
83	14.07	34.909	1.14	2.16	190	150	13.11	34.90	0.60	2.38	172	0.34
108	13.59	34.902	1.02	2.20	181	200	12.35	34.86	0.60	2.39	160	0.43
147	13.15	34.903	0.60	2.38	173	250	11.77	34.82	0.35	2.58	153	0.50
196	12.40	34.861	0.62	2.38	162	300	11.09	34.77	0.26	2.62	144	0.58
245	11.82	34.824	0.36	2.58	154	400	9.53	34.69	0.10	3.00	125	0.71
294	11.17	34.784	0.27	2.61	146	500	8.13	34.63	0.09	3.20	108	0.83
392	9.64	34.703	0.11	2.97	126	600	7.04	34.60	0.14	3.31	95	0.93
540	7.66	34.622	0.09	3.25	102	700	6.17	34.58	0.34	3.36	85	1.02
736	5.94	34.577	0.39	3.37	83	800	5.62	34.58	0.49	3.37	79	1.10
934	4.95	34.579	0.68	3.35	73	1000	4.68	34.58	0.77	3.36	69	1.25
1134	4.18	34.584	0.91	3.40	64							

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 22, 1959; 1514 GCT; 8°13'N, 87°52.5'W; sounding, 1800 fm; wind, 250°, 5 kt; weather, partly cloudy; sea, smooth; wire angle, 17°.																		
0	26.35	33.617	3.51	0.87	2.8	0.00	8.9	592	0	26.35	33.62	3.51	0.87	2.8	0.00	8.9	592	0.00
10	17.87	34.700	2.08	1.67	14.6	0.11	21.4	288	10	17.87	34.70	2.08	1.67	14.6	0.11	21.4	288	0.04
19	16.18	34.724	1.51	1.95	16.6	0.55	-	248	20	15.90	34.74	1.50	1.97	14.9	0.83	27.9	240	0.07
29	15.16	34.792	1.47	1.98	17.4	1.01	28.6	221	30	15.10	34.79	1.43	1.98	17.8	0.98	28.8	220	0.09
39	14.40	34.782	0.86	2.10	21.6	0.20	30.8	206	50	14.10	34.84	0.42	2.37	21.0	0.17	37.8	196	0.14
48	14.16	34.844	0.41	2.38	20.8	0.17	37.5	197	75	12.93	34.80	1.06	2.31	17.0	0.03	35.3	176	0.18
63	13.36	34.796	0.93	2.24	20.4	0.17	32.0	184	100	12.88	34.85	0.91	2.26	25.2	0.00	34.8	170	0.22
81	12.90	34.796	1.06	2.31	17.2	0.02	35.0	175	150	12.10	34.79	1.02	2.29	24.7	0.00	34.3	161	0.31
105	12.87	34.872	0.87	2.25	25.3	0.00	34.4	170	200	11.58	34.78	0.98	2.30	26.3	0.00	36.0	153	0.39
142	12.20	34.795	0.97	2.30	24.4	0.00	34.2	163	250	11.18	34.78	0.72	2.47				144	0.46
189	11.68	34.777	1.07	2.28	-	-	-	154	300	10.84	34.78	0.82	2.50				139	0.53
235	11.30	34.776	0.72	2.49	28.7	0.00	37.8	148	400	9.83	34.70	0.47	2.77				129	0.66
280	10.98	34.788	0.73	2.43	-	-	-	141	500	8.40	34.64	0.13	3.06	47.7	0.03	(34.2)	112	0.79
372	10.15	34.723	0.53	2.70	-	-	-	132	600	7.12	34.58	0.11	3.27	56.1	0.03	47.3	98	0.89
512	8.22	34.628	0.10	3.09	49.2	0.03	35.2	110	700	6.14	34.57	0.11	3.37	65.0	0.02	49.5	87	0.98
701	6.13	34.573	0.11	3.37	65.0	0.02	49.8	86	800	5.52	34.57	0.31	3.36	73.0	0.01	49.0	79	1.07
893	5.02	34.579	0.47	3.36	81.0	0.00	49.0	72	1000	4.57	34.59	0.60	3.37	91.2	0.00	50.7	67	1.21
1090	4.20	34.587	0.71	3.39	100.2	0.00	53.0	63										
SPENCER F. BAIRD; November 23, 1959; 0347 GCT; 8°10'N, 87°10'W; sounding, 1750 fm; wind, 240°, 5 kt; weather, partly cloudy; sea, smooth; wire angle, 23°.																		
0	25.63	33.888	4.20	0.93				551	0	25.63	33.89	4.20	0.93				551	0.00
9	22.90	34.199	3.53	1.25				452	10	22.00	34.28	3.31	1.34				420	0.05
18	17.04	34.746	2.01	1.69				265	20	16.82	34.78	1.93	1.72				258	0.08
28	16.01	34.851	1.44	1.96				235	30	15.80	34.85	1.37	1.98				230	0.11
37	15.20	34.833	1.23	2.01				219	50	14.50	34.86	1.18	2.07				202	0.15
46	14.66	34.861	1.15	2.06				206	75	13.78	34.90	1.29	2.10				184	0.20
60	14.08	34.872	1.32	2.09				193	100	13.38	34.90	0.94	2.19				177	0.24
79	13.71	34.902	1.28	2.11				183	150	12.96	34.90	0.74	2.29				169	0.33
103	13.36	34.905	0.91	2.20				177	200	12.35	34.87	0.76	2.30				160	0.41
141	13.02	34.905	0.74	2.29				170	250	11.75	34.82	0.60	2.42				152	0.49
188	12.45	34.866	0.79	2.28				162	300	11.12	34.77	0.73	2.38				144	0.56
236	11.99	34.842	0.56	2.45				156	400	9.72	34.71	0.33	2.87				127	0.70
283	11.31	34.782	0.75	2.36				148	500	8.05	34.65	0.14	3.17				105	0.82
380	10.11	34.728	0.43	2.75				131	600	7.13	34.61	0.20	3.20				96	0.92
525	7.79	34.638	0.14	3.18				103	700	6.40	34.59	0.36	3.21				88	1.01
722	6.23	34.589	0.38	3.22				86	800	5.70	34.58	0.43	3.26				80	1.09
920	4.96	34.581	0.55	3.31				72	1000	4.55	34.58	0.71	3.30				67	1.24
1119	4.16	34.591	0.97	3.28				63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 23, 1959; 0841 GCT; 8°11.5'N, 86°21.5'W; sounding, 1640 fm; wind, 270°, 10 kt; weather, rain; sea, smooth; wire angle, 23°.																		
0	26.06	33.624	4.07	0.81				583	0	26.06	33.62	4.07	0.81				583	0.00
9	26.06	33.626	4.05	0.84				583	10	26.05	33.63	4.04	0.85				582	0.06
19	21.48	34.620	3.10	1.26				383	20	21.27	34.64	3.03	1.28				376	0.11
28	20.17	34.675	2.63	1.39				345	30	19.30	34.68	2.37	1.47				324	0.14
38	17.24	34.685	1.82	1.67				275	50	15.70	34.71	1.54	1.98				239	0.20
47	15.94	34.698	1.60	1.94				244	75	14.27	34.80	1.38	2.05				201	0.25
61	14.81	34.763	1.38	2.03				216	100	13.88	34.89	1.07	2.13				187	0.30
79	14.12	34.823	1.38	2.07				198	150	13.41	34.92	0.67	2.28				176	0.39
102	13.86	34.898	1.02	2.15				187	200	12.87	34.88	0.61	2.37				168	0.48
138	13.56	34.931	0.73	2.24				178	250	12.24	34.85	0.56	2.46				160	0.56
183	13.04	34.895	0.58	2.33				171	300	11.47	34.80	0.36	2.62				149	0.64
228	12.58	34.874	0.65	2.43				164	400	9.90	34.72	0.14	2.94				129	0.78
270	11.98	34.840	0.46	2.48				155	500	8.48	34.66	0.10	3.10				111	0.90
356	10.54	34.749	0.21	2.86				137	600	7.22	34.61	0.12	3.28				96	1.00
488	8.66	34.661	0.09	3.07				114	700	6.27	34.59	0.18	3.35				86	1.09
674	6.44	34.595	0.14	3.34				88	800	5.65	34.58	0.39	3.36				79	1.17
866	5.30	34.578	0.55	3.37				76	1000	4.70	34.58	0.80	3.36				68	1.32
1061	4.44	34.590	0.91	3.36				66										
SPENCER F. BAIRD; November 23, 1959; 1452 GCT; 8°51.5'N, 87°01'W; sounding, 1665 fm; wind, 320°, 1 kt; weather, cloudy; sea, smooth; wire angle, 07°.																		
0	25.63	33.881	4.15	0.99	5.3	0.16	11.0	552	0	25.63	33.88	4.15	0.99	5.3	0.16	11.0	552	0.00
10	23.59	34.142	3.57	1.19	6.8	0.11	13.8	475	10	23.59	34.14	3.57	1.19	6.8	0.11	13.8	474	0.05
20	17.03	34.700	1.81	1.87	-	-	-	268	20	17.03	34.70	1.81	1.87	21.0	0.06	34.8	269	0.09
30	15.51	34.817	0.88	2.23	20.4	0.08	-	226	30	15.51	34.82	0.88	2.23	20.4	0.08	38.4	226	0.11
40	14.78	34.818	0.57	2.33	19.6	0.18	-	211	50	14.29	34.84	0.55	2.34	22.0	0.15	38.2	200	0.16
50	14.29	34.840	0.55	2.34	22.0	0.15	38.2	200	75	13.50	34.81	0.51	2.41	20.4	0.05	44.2	186	0.20
65	13.72	34.807	0.50	2.44	24.9	0.32	35.8	189	100	12.75	34.80	0.87	2.28	24.5	0.00	39.5	173	0.25
84	13.24	34.816	0.55	2.36	19.8	0.00	45.1	180	150	12.22	34.84	0.76	2.39	23.7	0.04	34.2	160	0.33
109	12.57	34.789	0.93	2.27	24.2	0.00	36.3	170	200	11.73	34.82	0.71	2.42	25.0	0.03	35.2	152	0.41
148	12.24	34.844	0.77	2.38	23.8	0.04	34.2	160	250	11.30	34.80	0.58	2.54	28.5	0.02	37.8	146	0.48
198	11.76	34.817	0.72	2.42	-	-	-	153	300	10.82	34.77	0.62	2.54				140	0.56
247	11.31	34.798	0.58	2.54	28.2	0.02	37.6	146	400	9.58	34.70	0.27	2.93				125	0.69
296	10.86	34.766	0.62	2.54	-	-	-	141	500	7.96	34.63	0.15	3.18				105	0.80
393	9.67	34.705	0.28	2.92	-	-	-	126	600	6.91	34.60	0.16	3.28	56.7	0.01	48.2	93	0.90
539	7.48	34.623	0.14	3.24	54.5	0.01	46.8	100	700	6.23	34.59	0.23	3.32	61.0	0.00	50.2	86	0.99
736	6.02	34.588	0.27	3.33	62.6	0.00	50.5	83	800	5.68	34.59	0.37	3.34	66.5	0.00	51.2	79	1.07
935	4.94	34.577	0.62	3.34	76.4	0.00	51.4	72	1000	4.64	34.58	0.72	3.34	82.0	0.00	51.1	68	1.22
1136	4.04	34.589	0.95	3.33	97.0	0.00	47.3	62										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 23, 1959; 2339 GCT; 9°21'N, 86°20'W; sounding, 1750 fm; wind, 180°, 3 kt; weather, clear; sea, slight; wire angle, 09°.																		
0	27.16	31.185	4.20	0.36				792	0	27.16	31.19	4.20	0.36				792	0.00
10	27.34	33.407	4.25	0.61				637	10	27.34	33.41	4.25	0.61				637	0.07
20	24.00	34.095	3.59	0.84				489	20	24.00	34.10	3.59	0.84				490	0.13
30	19.62	34.666	2.42	1.48				333	30	19.62	34.67	2.42	1.48				331	0.17
40	17.54	34.781	1.77	1.75				274	50	16.52	34.84	1.29	1.93				247	0.23
50	16.52	34.836	1.29	1.93				247	75	14.63	34.87	1.11	2.12				203	0.28
64	15.02	34.871	1.10	2.07				212	100	14.07	34.90	0.93	2.12				191	0.33
84	14.40	34.870	1.11	2.13				200	150	13.24	34.90	0.92	2.22				175	0.42
109	13.93	34.904	0.88	2.12				188	200	12.68	34.88	0.75	2.29				166	0.51
148	13.26	34.904	0.92	2.21				175	250	12.11	34.84	0.70	2.40				157	0.59
198	12.70	34.878	0.76	2.28				166	300	11.51	34.79	0.71	2.38				150	0.67
247	12.16	34.849	0.70	2.40				158	400	10.35	34.73	0.34	2.66				134	0.81
296	11.56	34.795	0.72	2.37				151	500	8.53	34.64	0.12	3.04				113	0.93
394	10.43	34.742	0.36	2.64				136	600	7.31	34.61	0.16	3.18				99	1.04
543	7.86	34.621	0.09	3.14				105	700	6.50	34.59	0.28	3.23				89	1.13
741	6.20	34.594	0.30	3.24				86	800	5.83	34.58	0.31	3.26				81	1.22
940	5.04	34.581	0.42	3.29				73	1000	4.79	34.58	0.52	3.30				70	1.37
1140	4.18	34.591	0.84	3.31				64										
SPENCER F. BAIRD; November 27, 1959; 0937 GCT; 8°42'N, 87°27'W; sounding, 1650 fm; wind, 320°, 3 kt; weather, clear; sea, smooth; wire angle, 15°.																		
0	25.90	33.917	4.06	1.06				557	0	25.90	33.92	4.06	1.06				557	0.00
10	22.91	34.195	3.40	1.31				452	10	22.91	34.20	3.40	1.31				451	0.05
20	16.69	34.796	1.83	1.90				254	20	16.69	34.80	1.83	1.90				253	0.09
29	15.71	34.795	1.59	1.97				232	30	15.65	34.80	1.58	1.98				230	0.11
39	14.84	34.774	1.52	2.13				216	50	14.03	34.77	0.70	2.30				200	0.15
49	14.07	34.767	0.69	2.30				200	75	13.39	34.80	0.60	2.48				183	0.20
63	13.64	34.797	0.71	2.31				190	100	13.11	34.84	0.46	2.49				176	0.25
83	13.28	34.808	0.54	2.51				182	150	12.47	34.85	0.37	2.52				163	0.33
107	13.02	34.850	0.43	2.48				174	200	12.04	34.84	0.57	2.44				156	0.41
144	12.52	34.845	0.37	2.52				164	250	11.62	34.81	0.83	2.49				150	0.49
190	12.12	34.840	0.53	2.43				158	300	11.14	34.78	0.95	2.51				145	0.56
236	11.74	34.820	0.71	2.50				152	400	9.72	34.71	0.19	2.70				127	0.70
280	11.36	34.790	1.00	2.44				148	500	8.35	34.65	0.17	3.17				110	0.81
371	10.23	34.732	0.22	2.88				133	600	7.27	34.61	0.17	3.36				97	0.92
508	8.26	34.653	0.17	3.19				108	700	6.32	34.59	0.19	3.47				87	1.01
694	6.38	34.586	0.19	3.46				88	800	5.56	34.58	0.34	3.49				78	1.09
882	5.06	34.579	0.56	3.49				73	1000	4.52	34.58	0.82	3.47				67	1.24
1071	4.22	34.590	0.94	3.45				63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; November 27, 1959; 1625 GCT; 9°20'N, 88°19.5'W; sounding, 1650 fm; wind, 040°, 8 kt; weather, partly cloudy; sea, moderate; wire angle, 20°.																		
0	26.54	33.870	4.21	0.92				580	0	26.54	33.87	4.21	0.92				580	0.00
9	25.17	33.951	3.93	0.99				533	10	24.70	34.00	3.83	1.01				516	0.05
19	19.72	34.653	2.41	1.51				336	20	18.80	34.74	1.96	1.75				308	0.10
28	17.18	34.837	1.12	2.04				262	30	16.80	34.84	1.05	2.06				252	0.12
38	15.98	34.821	0.95	2.13				236	50	15.17	34.80	0.92	2.18				220	0.17
47	15.30	34.802	0.94	2.18				223	75	14.22	34.88	0.75	2.23				195	0.22
61	14.68	34.883	0.85	2.16				205	100	13.42	34.85	0.72	2.37				181	0.27
80	14.04	34.868	0.70	2.25				192	150	12.42	34.84	0.13	2.51				163	0.36
103	13.30	34.850	0.72	2.40				179	200	11.84	34.83	0.61	2.43				154	0.44
140	12.50	34.839	0.12	2.53				165	250	11.26	34.78	0.56	2.61				147	0.51
187	12.00	34.835	0.53	2.41				156	300	10.72	34.76	0.19	2.76				140	0.58
232	11.46	34.791	0.65	2.54				150	400	9.12	34.67	0.08	3.05				120	0.71
277	10.98	34.771	0.23	2.71				143	500	7.74	34.61	0.08	3.31				105	0.82
364	9.76	34.711	0.10	2.94				127	600	6.71	34.58	0.16	3.33				92	0.92
496	7.79	34.613	0.07	3.31				105	700	5.93	34.57	0.20	3.38				83	1.01
683	6.02	34.585	0.20	3.37				84	800	5.31	34.57	0.22	3.46				76	1.09
874	4.90	34.574	0.30	3.52				72	1000	4.43	34.58	0.61	3.45				66	1.23
1069	4.22	34.591	0.88	3.41				63										
SPENCER F. BAIRD; November 28, 1959; 0223 GCT; 10°00'N, 88°20.5'W; sounding, 1700 fm; wind, 040°, 3 kt; weather, clear; sea, slight; wire angle, 15°.																		
0	26.54	33.524	4.48	0.78	3.0	0.07	5.8	605	0	26.54	33.52	4.48	0.78	3.0	0.07	5.8	605	0.00
10	25.97	33.592	4.37	0.89	2.5	0.06	8.2	583	10	25.97	33.59	4.37	0.89	2.5	0.06	8.2	582	0.06
19	20.33	34.576	2.88	1.49	7.2	0.22	-	356	20	20.10	34.60	2.80	1.52	7.5	0.25	17.4	349	0.11
29	18.00	34.725	1.92	1.84	11.7	0.49	22.2	289	30	17.70	34.73	1.80	1.90	13.3	0.49	26.0	281	0.14
39	16.04	34.790	1.10	2.13	16.2	0.28	31.2	240	50	15.50	34.88	1.12	2.09	14.5	0.02	27.9	221	0.19
48	15.60	34.870	1.10	2.09	14.4	0.02	28.5	225	75	14.24	34.85	1.00	2.24	19.9	0.03	29.2	199	0.24
63	14.89	34.907	1.23	2.14	16.8	0.03	27.2	207	100	13.00	34.76	0.98	2.30	22.2	0.01	26.5	180	0.29
82	13.84	34.803	0.92	2.29	20.2	0.02	29.0	194	150	12.50	34.85	0.69	2.45	24.8	0.01	32.3	164	0.37
106	12.90	34.759	0.98	2.30	22.6	0.01	27.0	178	200	11.84	34.81	0.37	2.57	27.8	0.02	29.0	155	0.45
145	12.54	34.849	0.72	2.43	24.8	0.01	33.0	165	250	11.13	34.77	0.27	2.77	30.0	0.04	29.2	145	0.53
194	11.94	34.824	0.40	2.52	-	-	-	156	300	10.47	34.74	0.35	2.76	33.9	0.10	36.0	135	0.60
243	11.23	34.784	0.26	2.77	29.8	0.04	28.8	146	400	8.50	34.65	0.22	3.27	56.2	0.45	38.6	112	0.72
292	10.58	34.750	0.35	2.76	32.8	0.08	34.2	138	500	7.35	34.60	0.18	3.30	57.3	0.21	39.9	100	0.83
389	8.66	34.656	0.23	3.25	55.8	0.45	-	114	600	6.51	34.58	0.18	3.35	65.7	0.04	42.9	90	0.92
537	7.00	34.592	0.18	3.31	59.8	0.11	40.8	96	700	5.86	34.58	0.22	3.44	70.0	0.01	45.5	82	1.01
735	5.64	34.578	0.26	3.46	70.2	0.01	46.1	80	800	5.30	34.58	0.42	3.43	72.1	0.02	47.1	75	1.09
934	4.68	34.586	0.77	3.37	77.0	0.03	46.4	68	1000	4.42	34.59	0.86	3.37	80.1	0.03	46.1	65	1.23
1135	3.97	34.594	0.99	3.43	89.0	0.00	44.6	61										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 28, 1959; 1634 GCT; 10°41'N, 88°20'W; sounding, 1700 fm; wind, 050°, 12 kt; weather, partly cloudy; sea, moderate; wire angle, 15°.																		
0	26.34	33.748	3.79	0.82				582	0	26.34	33.75	3.79	0.82				583	0.00
10	26.13	33.772	4.13	0.90				575	10	26.13	33.77	4.13	0.90				574	0.06
19	19.48	34.728	2.63	1.46				324	20	19.37	34.73	2.62	1.48				321	0.10
29	17.66	34.756	2.29	1.66				279	30	17.64	34.76	2.28	1.67				278	0.13
39	16.81	34.814	1.53	1.93				256	50	15.60	34.81	0.97	2.16				229	0.18
49	15.72	34.812	0.98	2.15				232	75	14.01	34.85	0.90	2.23				194	0.24
63	14.33	34.806	0.90	2.21				203	100	13.65	34.86	0.89	2.23				185	0.28
82	13.90	34.856	0.90	2.23				190	150	12.87	34.88	0.68	2.39				169	0.37
106	13.53	34.862	0.89	2.24				183	200	12.01	34.83	0.45	2.47				157	0.45
144	12.94	34.878	0.70	2.38				170	250	11.16	34.79	0.23	2.71				143	0.53
192	12.16	34.844	0.50	2.43				159	300	10.30	34.74	0.13	2.86				133	0.60
238	11.38	34.799	0.26	2.66				148	400	8.87	34.68	0.08	3.14				116	0.72
283	10.59	34.756	0.15	2.78				137	500	7.70	34.62	0.06	3.25				102	0.83
371	9.28	34.700	0.08	3.08				120	600	6.83	34.60	0.06	3.30				93	0.93
502	7.68	34.622	0.06	3.26				103	700	6.17	34.58	0.08	3.43				86	1.02
686	6.26	34.575	0.06	3.42				87	800	5.60	34.57	0.19	3.45				79	1.10
876	5.25	34.572	0.30	3.46				76	1000	4.67	34.57	0.47	3.46				69	1.25
1069	4.30	34.583	0.58	3.46				65										
SPENCER F. BAIRD; November 28, 1959; 2345 GCT; 10°06'N, 89°01'W; sounding, >1800 fm; wind, 050°, 3 kt; weather, partly cloudy; sea, moderate; wire angle, 05°.																		
0	26.94	33.509	4.39	0.76				618	0	26.94	33.51	4.39	0.76				618	0.00
10	26.93	33.512	4.40	0.75				617	10	26.93	33.51	4.40	0.75				618	0.06
20	24.14	34.205	3.67	1.14				485	20	24.14	34.20	3.67	1.14				486	0.12
30	19.05	34.686	2.14	1.68				317	30	19.05	34.69	2.14	1.68				317	0.16
40	16.62	34.732	1.70	1.88				257	50	15.60	34.74	1.68	1.93				233	0.21
50	15.60	34.739	1.68	1.93				234	75	14.48	34.80	1.06	2.17				206	0.27
65	14.69	34.766	1.08	2.18				213	100	14.02	34.86	1.04	2.13				192	0.32
109	13.84	34.866	1.03	2.12				189	150	13.10	34.87	0.78	2.27				174	0.41
148	13.11	34.873	0.78	2.27				174	200	12.33	34.84	0.62	2.37				162	0.49
198	12.35	34.839	0.63	2.36				162	250	11.54	34.79	0.31	2.65				151	0.57
247	11.64	34.804	0.33	2.63				152	300	10.32	34.73	0.20	2.83				134	0.64
297	10.40	34.737	0.21	2.80				135	400	8.50	34.64	0.14	3.22				113	0.77
395	8.54	34.644	0.15	3.22				113	500	7.32	34.60	0.11	3.21				99	0.87
544	6.97	34.588	0.10	3.21				95	600	6.55	34.58	0.11	3.29				90	0.97
743	5.59	34.567	0.16	3.47				80	700	5.87	34.57	0.14	3.42				82	1.05
942	4.53	34.576	0.42	3.48				67	800	5.27	34.57	0.22	3.47				76	1.13
1142	3.88	34.589	0.80	3.43				60	1000	4.31	34.58	0.53	3.46				65	1.27

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 29, 1959; 1224 GCT; 9°13'N, 90°09'W; sounding, >1900 fm; wind, 050°, 19 kt; weather, partly cloudy; sea, rough; wire angle, 08°.																		
0	26.82	33.412	4.07	0.49	1.2	0.13	1.7	621	0	26.82	33.41	4.07	0.49	1.2	0.13	1.7	621	0.00
10	26.44	33.508	4.29	0.58	1.5	0.17	2.6	603	10	26.44	33.51	4.29	0.58	1.5	0.17	2.6	602	0.06
20	21.84	34.549	2.50	1.34	-	-	-	398	20	21.84	34.55	2.50	1.34	5.8	(0.27)		398	0.11
30	16.92	34.757	1.64	1.94	17.4	0.23	-	261	30	16.92	34.76	1.64	1.94	17.4	0.23		261	0.14
40	15.17	34.875	1.50	1.96	18.2	0.19	-	215	50	14.70	34.88	1.24	2.16	20.1	0.17	27.0	206	0.19
49	14.73	34.882	1.26	2.16	19.4	0.17	27.6	206	75	14.00	34.92	1.01	2.18	19.5	0.19	30.2	187	0.24
64	14.29	34.923	1.17	2.12	19.6	0.24	26.8	194	100	13.60	34.92	1.01	2.19	21.7	0.08	27.7	180	0.29
84	13.84	34.923	0.96	2.19	20.6	0.14	29.6	185	150	13.00	34.90	0.76	2.29	23.8	0.04	31.8	170	0.37
109	13.47	34.918	1.06	2.19	20.6	0.06	28.4	177	200	12.42	34.86	0.69	2.32	27.8	0.03	32.5	162	0.46
148	13.01	34.904	0.76	2.29	23.2	0.04	31.9	170	250	11.54	34.80	0.62	2.47	29.0	0.05	31.5	150	0.53
199	12.43	34.863	0.70	2.31	-	-	-	162	300	10.93	34.76	0.73	2.43				143	0.61
248	11.57	34.804	0.62	2.47	29.0	0.05	31.7	151	400	9.90	34.72	0.48	2.76				129	0.74
297	10.95	34.756	0.74	2.43	-	-	-	143	500	8.47	34.64	0.18	3.16				113	0.86
396	9.95	34.722	0.50	2.74	-	-	-	129	600	7.29	34.60	0.08	3.32				98	0.97
544	7.86	34.621	0.08	3.27	47.8	0.50	32.2	105	700	6.39	34.58	0.11	3.37				88	1.06
742	6.02	34.576	0.13	3.38	-	-	-	84	800	5.68	34.58	0.20	3.42				80	1.15
942	4.91	34.576	0.43	3.45	86.0	0.06	39.5	71	1000	4.63	34.58	0.54	3.44	88.7	0.05	40.8	68	1.29
1143	4.05	34.588	0.80	3.38	92.5	0.06	44.2	62										
SPENCER F. BAIRD; November 29, 1959; 1947 GCT; 8°46'N, 90°34.5'W; sounding, >1800 fm; wind, 060°, 23 kt; weather, clear; sea, very rough; wire angle, 24°.																		
0	25.90	33.623	4.44	0.75				579	0	25.90	33.62	4.44	0.75				579	0.00
10	24.26	33.807	4.10	0.99				517	10	24.26	33.81	4.10	0.99				518	0.05
20	16.08	34.931	1.55	2.06				231	20	16.08	34.93	1.55	2.06				230	0.09
29	15.76	34.928	1.43	2.08				224	30	15.74	34.93	1.42	2.08				223	0.11
39	15.27	34.928	1.29	2.06				213	50	14.78	34.91	1.28	2.18				204	0.16
48	14.87	34.912	1.28	2.18				206	75	13.95	34.90	1.09	2.19				189	0.21
63	14.16	34.874	1.20	2.14				195	100	13.66	34.92	1.03	2.18				181	0.25
82	13.86	34.910	1.03	2.22				186	150	13.09	34.92	0.83	2.29				170	0.34
107	13.59	34.924	1.03	2.18				180	200	12.50	34.88	0.89	2.33				162	0.42
145	13.18	34.917	0.83	2.29				172	250	11.98	34.83	0.68	2.51				156	0.50
195	12.57	34.878	0.90	2.31				163	300	11.32	34.79	0.60	2.50				147	0.58
243	12.07	34.840	0.70	2.51				157	400	10.04	34.71	0.62	2.79				131	0.72
291	11.44	34.801	0.59	2.49				148	500	8.70	34.62	0.13	3.12				117	0.84
385	10.22	34.728	0.63	2.73				133	600	7.48	34.59	0.08	3.30				102	0.95
528	8.36	34.601	0.07	3.18				114	700	6.45	34.58	0.16	3.37				89	1.05
721	6.28	34.584	0.18	3.38				87	800	5.74	34.58	0.30	3.40				81	1.13
916	5.10	34.576	0.49	3.42				73	1000	4.67	34.58	0.63	3.42				69	1.28
1114	4.20	34.588	0.81	3.42				63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; November 30, 1959; 0859 GCT; 8°44'N, 88°34'W; sounding, >1800 fm; wind, 050°, 8 kt; weather, partly cloudy; sea, rough; wire angle, 14°.																		
0	25.62	34.017	4.05	0.99				542	0	25.62	34.02	4.05	0.99				541	0.00
9	23.52	34.253	3.36	1.24				465	10	23.00	34.31	3.19	1.29				446	0.05
19	17.50	34.756	1.36	1.88				275	20	17.35	34.77	1.31	1.91				270	0.09
28	16.54	34.824	0.98	2.12				249	30	16.45	34.83	0.95	2.12				246	0.11
37	15.93	34.893	0.89	2.11				230	50	14.70	34.82	1.04	2.23				210	0.16
46	15.14	34.849	1.00	2.24				216	75	13.82	34.81	0.52	2.33				192	0.21
60	14.10	34.755	1.08	2.21				202	100	13.20	34.84	0.50	2.36				178	0.25
78	13.75	34.822	0.49	2.36				190	150	12.33	34.82	0.54	2.41				163	0.34
101	13.17	34.844	0.50	2.36				177	200	11.64	34.80	0.46	2.58				152	0.42
136	12.52	34.817	0.55	2.40				167	250	11.09	34.77	0.59	2.56				144	0.49
180	11.93	34.811	0.51	2.43				157	300	10.61	34.75	0.47	2.64				138	0.56
223	11.35	34.776	0.42	2.65				148	400	9.31	34.68	0.14	3.05				122	0.69
264	10.96	34.761	0.63	2.54				143	500	8.05	34.62	0.09	3.17				107	0.81
349	10.06	34.723	0.17	2.90				130	600	6.95	34.59	0.07	3.30				95	0.91
479	8.29	34.628	0.11	3.14				110	700	6.04	34.57	0.12	3.42				84	1.00
656	6.44	34.584	0.07	3.35				89	800	5.38	34.57	0.25	3.49				77	1.08
836	5.17	34.572	0.30	3.50				75	1000	4.39	34.58	0.57	3.48				66	1.22
1023	4.30	34.584	0.60	3.47				65										
SPENCER F. BAIRD; November 30, 1959; 2000 GCT; 7°46'N, 88°26'W; sounding, 1900 fm; wind, 030°, 13 kt; weather, partly cloudy; sea, rough; wire angle, 20°.																		
0	26.12	33.951	4.48	0.92	3.2	0.13	7.4	561	0	26.12	33.95	4.48	0.92	3.2	0.13	7.4	561	0.00
9	25.85	33.961	4.38	0.97	3.0	0.09	7.6	553	10	25.60	33.98	4.29	1.01	3.4	0.07	8.1	543	0.06
19	18.43	34.773	2.05	1.79	13.4	0.12	21.8	296	20	18.20	34.78	2.06	1.78	14.2	0.13	22.4	290	0.10
28	16.38	34.796	2.31	1.72	16.0	0.19	23.2	247	30	16.26	34.80	2.28	1.73	16.0	0.20	23.3	243	0.12
38	15.64	34.845	1.59	1.94	16.4	0.26	28.0	227	50	14.65	34.77	1.46	2.11	18.5	0.11	27.7	212	0.17
47	14.96	34.776	1.50	2.10	15.8	0.11	29.8	218	75	13.89	34.80	1.16	2.17	19.4	0.03	34.2	194	0.22
62	14.08	34.762	1.31	2.12	19.8	0.11	27.8	201	100	13.57	34.88	0.90	2.24	21.3	0.04	30.7	182	0.27
81	13.82	34.827	1.12	2.19	19.8	0.03	31.6	191	150	12.83	34.88	0.57	2.38	24.8	0.02	36.1	169	0.35
104	13.50	34.876	0.87	2.25	21.6	0.05	31.0	181	200	12.04	34.83	0.42	2.55	28.7	0.02	38.0	157	0.44
142	12.99	34.880	0.61	2.37	23.8	0.04	35.6	171	250	11.51	34.80	0.33	2.63	29.7	0.05	36.9	150	0.51
189	12.22	34.840	0.46	2.49	-	-	-	160	300	10.87	34.77	0.30	2.71	31.0	0.09	34.3	141	0.59
236	11.65	34.806	0.33	2.63	29.4	0.04	37.3	152	400	9.48	34.69	0.15	3.08	36.6	0.16	31.5	123	0.72
283	11.14	34.780	0.34	2.62	30.0	0.07	-	145	500	8.28	34.64	0.08	3.17	50.0	0.17	36.0	110	0.83
373	9.84	34.711	0.16	3.03	-	-	-	128	600	7.16	34.60	0.14	3.30	67.9	0.11	42.7	97	0.94
510	8.17	34.634	0.08	3.18	52.4	0.17	36.8	109	700	6.19	34.58	0.27	3.35	74.4	0.03	47.2	86	1.03
702	6.17	34.581	0.28	3.35	74.8	0.03	47.3	86	800	5.59	34.57	0.48	3.34	78.8	0.01	47.6	79	1.11
898	5.08	34.574	0.68	3.33	85.4	0.00	47.0	74	1000	4.64	34.58	0.83	3.37	93.0	0.00	45.3	68	1.26
1097	4.28	34.588	0.95	3.41	104.2	0.00	43.4	64										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; December 1, 1959; 0839 GCT; 7°24.5'N, 89°25'W; sounding, >1800 fm; wind, 060°, 10 kt; weather, missing; sea, missing; wire angle, 20°.																		
0	25.84	33.870	3.92	1.07				559	0	25.84	33.87	3.92	1.07				560	0.00
9	24.33	34.189	3.40	1.36				492	10	24.05	34.23	3.30	1.41				481	0.05
19	17.94	34.772	1.39	1.93				284	20	17.77	34.79	1.42	1.92				279	0.09
28	16.40	34.850	1.87	1.84				244	30	16.04	34.85	1.63	1.93				236	0.12
38	14.88	34.860	0.54	2.35				210	50	14.27	34.89	1.03	2.28				196	0.16
47	14.38	34.867	0.83	2.33				198	75	13.76	34.92	0.93	2.24				183	0.21
61	14.09	34.912	1.10	2.18				190	100	13.38	34.92	0.76	2.28				175	0.25
80	13.68	34.920	0.91	2.26				182	150	12.85	34.91	0.95	2.25				166	0.34
103	13.36	34.918	0.75	2.28				175	200	12.27	34.86	0.64	2.38				159	0.42
141	12.98	34.908	1.02	2.25				169	250	11.69	34.82	0.60	2.50				151	0.50
187	12.36	34.865	0.64	2.35				161	300	11.04	34.77	0.57	2.53				144	0.57
233	11.94	34.840	0.65	2.49				155	400	9.65	34.70	0.68	2.78				125	0.70
279	11.27	34.787	0.54	2.52				146	500	8.13	34.63	0.09	3.18				108	0.82
368	10.14	34.725	0.85	2.63				132	600	7.01	34.60	0.13	3.28				95	0.92
503	8.11	34.627	0.09	3.19				108	700	6.18	34.58	0.22	3.31				86	1.01
692	6.22	34.581	0.21	3.30				86	800	5.62	34.58	0.40	3.33				79	1.09
886	5.23	34.575	0.54	3.34				75	1000	4.76	34.58	0.68	3.37				70	1.24
1085	4.36	34.585	0.80	3.38				65										
SPENCER F. BAIRD; December 1, 1959; 1355 GCT; 6°57'N, 88°49'W; sounding, 1900 fm; wind, 060°, 6 kt; weather, rain; sea, slight; wire angle, 09°.																		
0	26.40	33.335	4.52	0.79				614	0	26.40	33.34	4.52	0.79				623	0.00
10	26.55	33.650	4.37	0.90				596	10	26.55	33.65	4.37	0.90				596	0.06
20	19.78	34.567	2.51	1.58				343	20	19.78	34.57	2.51	1.58				343	0.11
30	16.82	34.778	1.91	1.87				258	30	16.82	34.78	1.91	1.87				256	0.14
39	15.91	34.792	1.69	1.90				237	50	15.20	34.90	1.33	2.16				214	0.18
49	15.26	34.900	1.34	2.16				215	75	14.10	34.86	1.15	2.17				193	0.24
64	14.34	34.821	1.20	2.16				202	100	13.70	34.92	0.95	2.23				182	0.28
84	13.95	34.907	1.08	2.18				188	150	12.89	34.88	0.68	2.40				169	0.37
109	13.53	34.918	0.88	2.26				179	200	12.37	34.86	0.62	2.42				161	0.45
149	12.90	34.884	0.68	2.40				169	250	11.62	34.81	0.58	2.57				151	0.53
198	12.39	34.865	0.64	2.42				161	300	10.90	34.76	0.71	2.54				142	0.60
248	11.64	34.812	0.58	2.57				151	400	9.75	34.71	0.25	2.96				127	0.74
298	10.92	34.762	0.72	2.54				142	500	8.18	34.64	0.12	3.23				109	0.86
397	9.79	34.709	0.26	2.95				128	600	7.13	34.61	0.18	3.28				96	0.96
546	7.59	34.622	0.12	3.28				101	700	6.43	34.60	0.38	3.27				88	1.05
745	6.14	34.588	0.49	3.27				85	800	5.85	34.59	0.56	3.28				81	1.14
944	5.08	34.579	0.74	3.36				73	1000	4.80	34.58	0.83	3.36				70	1.29
1144	4.22	34.592	1.11	3.32				63										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	$\Delta D'$ dyn m
SPENCER F. BAIRD; December 2, 1959; 0054 GCT; 6°25'N, 88°15'W; sounding, 1700 fm; wind, 320°, 4 kt; weather, partly cloudy; sea, slight; wire angle, 14°.																		
0	27.06	33.142	4.03	0.44				648	0	27.06	33.14	4.03	0.44				648	0.00
10	26.56	33.288	4.21	0.49				622	10	26.56	33.29	4.21	0.49				622	0.06
19	24.53	34.086	3.56	0.76				505	20	24.30	34.13	3.51	0.79				495	0.12
29	20.62	34.603	2.93	1.33				362	30	20.37	34.61	2.86	1.36				353	0.16
39	18.56	34.772	2.23	1.62				299	50	16.14	34.79	1.63	1.98				242	0.22
49	16.34	34.779	1.64	1.98				247	75	14.53	34.90	1.43	2.06				200	0.28
63	14.89	34.870	1.51	2.01				210	100	14.17	34.93	1.13	2.14				190	0.32
83	14.43	34.913	1.40	2.08				197	150	13.38	34.93	0.90	2.22				175	0.42
107	14.04	34.932	1.06	2.17				188	200	12.68	34.88	0.53	2.36				164	0.50
147	13.45	34.926	0.96	2.21				176	250	12.02	34.84	0.41	2.55				156	0.58
196	12.73	34.885	0.54	2.34				166	300	11.34	34.80	0.29	2.60				147	0.66
244	12.11	34.852	0.43	2.54				157	400	9.52	34.71	0.18	3.01				123	0.79
293	11.50	34.812	0.32	2.57				149	500	8.19	34.65	0.24	3.16				108	0.91
391	9.69	34.719	0.18	2.99				125	600	7.31	34.61	0.31	3.19				98	1.01
540	7.79	34.632	0.26	3.18				104	700	6.61	34.59	0.42	3.21				90	1.10
739	6.34	34.578	0.48	3.22				88	800	5.94	34.58	0.59	3.24				83	1.19
938	5.14	34.573	0.82	3.27				74	1000	4.86	34.58	0.89	3.28				71	1.34
1139	4.34	34.583	1.01	3.31				65										
SPENCER F. BAIRD; December 4, 1959; 0811 GCT; 5°21.5'N, 86°51.5'W; sounding, 1000 fm; wind, missing; weather, missing; sea, missing; wire angle, 00°.[a]																		
0	26.70	33.04	4.34	0.40	0.00	0.4		644	0	26.70	33.04	4.34	0.40	0.00	0.4		644	0.00
10	26.75	33.04	4.25	0.40	-	-		646	10	26.75	33.04	4.25	0.40				646	0.06
30	26.70	33.09	4.22	0.36	-	-		641	20	26.72	33.06	4.23	0.37				644	0.13
40	26.64	33.09	4.18	0.41	-	-		639	30	26.70	33.09	4.22	0.36				642	0.19
50	25.94	33.88	4.22	0.42	-	-		561	50	25.94	33.88	4.22	0.42				561	0.31
65	18.59	34.78	2.12	1.76	-	-		299	75	15.97	34.91	1.78	1.89				230	0.41
85	15.28	34.95	1.72	1.92	-	-		212	100	14.86	34.94	1.45	1.93				204	0.46
110	14.59	34.93	1.27	1.96	-	-		199	150	13.72	34.94	0.98	2.20				180	0.56
150	13.72	34.94	0.98	2.20	-	-		181	200	12.93	34.90	0.73	2.36				169	0.65
200	12.93	34.90	0.73	2.36	-	-		168										

a) See table, "Station 50, surface observations off Cocos Island, December 3, 1959," following last hydrographic station of this cruise (p. 556).

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; December 4, 1959; 0958 GCT; 5°27'N, 86°58'W; sounding, 150 fm; wind, missing; weather, missing; sea, missing; wire angle, 00°.																		
0	26.68	33.01	4.52	0.37	0.6	0.00	0.2	646	0	26.68	33.01	4.52	0.37	0.6	0.00	0.2	646	0.00
10	26.65	33.04	4.30	0.38	-	-	-	643	10	26.65	33.04	4.30	0.38				643	0.06
30	26.63	33.07	4.43	0.42	-	-	-	640	20	26.64	33.06	4.36	0.40				642	0.13
40	23.93	33.94	3.84	0.78	-	-	-	499	30	26.63	33.07	4.43	0.42				640	0.19
50	21.04	34.48	3.20	0.77	-	-	-	382	50	21.04	34.48	3.20	0.77				381	0.29
65	16.13	34.93	1.62	2.02	-	-	-	232	75	15.57	34.94	1.36	2.04				219	0.37
85	15.29	34.94	1.26	2.05	-	-	-	213	100	15.04	34.94	1.22	2.05				206	0.42
110	14.95	34.94	1.21	2.05	-	-	-	206	150	13.77	34.53	1.04	2.17				182	0.52
150	13.77	34.93	1.04	2.17	-	-	-	183	200	13.02	34.51	0.98	2.32				170	0.61
200	13.02	34.91	0.98	2.32	-	-	-	170										
SPENCER F. BAIRD; December 4, 1959; 1105 GCT; 5°29.5'N, 87°01'W; sounding, 65 fm; wind, missing; weather, missing; sea, missing; wire angle, 00°.																		
0	26.60	33.07	4.57	0.36	0.0	0.00	0.4	639	0	26.60	33.07	4.57	0.36	0.0	0.00	0.4	639	0.00
10	26.66	33.06	4.46	0.40	-	-	-	641	10	26.66	33.06	4.46	0.40				641	0.06
30	26.21	33.24	4.46	0.44	-	-	-	615	20	26.73	33.06	4.46	0.40				643	0.13
40	23.30	34.06	3.75	0.86	-	-	-	472	30	26.21	33.24	4.46	0.44				616	0.19
50	21.07	34.51	3.32	1.17	-	-	-	380	50	21.07	34.51	3.32	1.17				380	0.29
65	17.36	34.83	1.80	1.89	-	-	-	267	75	16.38	34.88	1.20	2.00				240	0.37
85	15.14	34.92	1.15	2.11	-	-	-	211	100	14.65	34.91	1.09	2.14				201	0.42
110	14.54	34.91	1.08	2.15	-	-	-	200										
SPENCER F. BAIRD; December 4, 1959; 1446 GCT; 5°31'N, 87°02.5'W; sounding, 38 fm; wind, missing; weather, missing; sea, missing; wire angle, 02°.																		
0	26.80	32.81	4.15	0.39	0.0	0.00	0.7	664	0	26.80	32.81	4.15	0.39	0.0	0.00	0.7	664	0.00
10	26.72	33.06	4.21	0.47	-	-	-	644	10	26.72	33.06	4.21	0.47				644	0.07
30	26.67	33.07	4.33	0.37	-	-	-	641	20	26.70	33.06	4.27	0.38				643	0.13
40	26.64	33.07	4.00	0.45	-	-	-	640	30	26.67	33.07	4.33	0.37				642	0.20
50	21.08	34.46	3.05	1.18	-	-	-	384	50	21.08	34.46	3.05	1.18				386	0.30
65	17.39	34.80	1.91	1.86	-	-	-	269										
SPENCER F. BAIRD; December 4, 1959; 1553 GCT; 5°33.5'N, 87°04.5'W; sounding, 48 fm; wind, missing; weather, missing; sea, missing; wire angle, 00°.																		
0	27.05	32.97	4.51	0.37	0.5	0.00	0.4	660	0	27.05	32.97	4.51	0.37	0.5	0.00	0.4	660	0.00
10	26.78	33.00	4.59	0.32	-	-	-	650	10	26.78	33.00	4.59	0.32				650	0.07
30	25.53	33.33	4.33	0.54	-	-	-	588	20	26.76	33.01	4.59	0.32				648	0.13
40	23.00	34.05	3.83	0.90	-	-	-	465	30	25.53	33.33	4.33	0.54				590	0.19
50	19.28	34.60	2.66	1.41	-	-	-	329	50	19.28	34.60	2.66	1.41				330	0.28
65	16.43	34.85	1.55	1.98	-	-	-	244	75	15.91	34.89	1.35	2.00				232	0.35
75	15.91	34.89	1.35	2.00	-	-	-	230										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	NO_3-N	δ_T	$\Delta D'$
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	µg at/L	cl/ton	dyn m
SPENCER F. BAIRD; December 4, 1959; 1712 GCT; 5°35'N, 87°06'W; sounding, 560 fm; wind, missing; weather, missing; sea, missing; wire angle, 09°.																		
0	26.90	32.96	4.48	0.36	0.9	0.00	0.3	656	0	26.90	32.96	4.48	0.36	0.9	0.00	0.3	656	0.00
10	26.74	32.99	4.44	0.41	2.7	0.07	3.6	649	10	26.74	32.99	4.44	0.41	2.7	0.07	3.6	650	0.07
30	24.46	34.00	4.10	0.71	3.5	0.10	6.9	509	20	26.30	33.16	4.38	0.48	3.8	0.07	5.2	624	0.13
40	23.29	34.10	3.83	0.87	7.1	0.26	15.3	469	30	24.46	34.00	4.10	0.71	3.5	0.10	6.9	510	0.19
50	18.95	34.59	2.86	1.37	15.4	0.13	25.2	321	50	18.95	34.59	2.86	1.37	15.4	0.13	25.2	321	0.27
65	16.33	34.88	1.24	2.06	16.8	0.04	29.3	240	75	16.00	34.90	1.11	2.09	16.8	0.04	30.0	230	0.34
85	15.59	34.93	1.02	2.11	-	-	-	220	100	15.13	34.94	1.01	2.14	18.2	0.03	32.9	210	0.39
110	14.49	34.94	0.98	2.16	20.0	0.03	36.0	196	150	13.48	34.92	0.86	2.22	22.8	0.02	32.6	178	0.49
150	13.48	34.92	0.86	2.22	22.8	0.02	32.6	178	200	12.63	34.88	0.86	2.37				164	0.57
200	12.63	34.88	0.86	2.37	-	-	-	164										
SPENCER F. BAIRD; December 4, 1959; 2129 GCT; 5°38'N, 87°09'W; sounding, 830 fm; wind, missing; weather, missing; sea, missing; wire angle, 00°.																		
0	27.30	32.98	4.49	0.38	0.0	0.00	0.1	667	0	27.30	32.98	4.49	0.38	0.0	0.00	0.1	667	0.00
10	26.81	33.00	4.58	0.41	-	-	-	650	10	26.81	33.00	4.58	0.41				650	0.07
30	26.22	33.14	4.60	0.40	-	-	-	623	20	26.63	33.03	4.59	0.40				643	0.13
40	24.20	34.12	3.79	0.82	-	-	-	493	30	26.22	33.14	4.60	0.40				622	0.19
50	21.64	34.43	3.46	1.05	-	-	-	401	50	21.64	34.43	3.46	1.05				401	0.30
65	17.79	34.81	2.15	1.75	-	-	-	278	75	16.73	34.88	1.50	1.94				248	0.38
85	15.84	34.92	1.08	2.10	-	-	-	226	100	15.22	34.92	0.99	2.15				212	0.43
110	14.62	34.93	0.97	2.18	-	-	-	200	150	13.55	34.91	0.94	2.18				180	0.53
150	13.55	34.91	0.94	2.18	-	-	-	180	200	12.65	34.88	0.75	2.35				164	0.62
200	12.65	34.88	0.75	2.35	-	-	-	165										
SPENCER F. BAIRD; December 4, 1959; 2256 GCT; 5°43.5'N, 87°14.5'W; sounding, 1000 fm; wind, missing; weather, missing; sea, missing; wire angle, 12°.																		
0	27.02	33.05	4.40	0.32	0.3	0.00	0.1	653	0	27.02	33.05	4.40	0.32	0.3	0.00	0.1	652	0.00
10	26.67	33.03	4.49	0.43	-	-	-	644	10	26.67	33.03	4.49	0.43				643	0.06
29	23.86	34.25	3.89	0.85	-	-	-	474	20	26.53	33.09	4.48	0.46				635	0.13
39	21.61	34.51	3.39	1.14	-	-	-	394	30	23.44	34.30	3.80	0.93				459	0.18
49	19.36	34.69	2.70	1.40	-	-	-	324	50	19.32	34.70	2.69	1.42				323	0.26
64	18.23	34.81	2.43	1.65	-	-	-	288	75	16.92	34.87	1.82	1.83				253	0.33
83	15.83	34.91	1.26	2.02	-	-	-	227	100	15.20	34.94	1.08	2.15				211	0.39
108	14.90	34.94	1.00	2.18	-	-	-	205	150	13.51	34.91	0.84	2.22				180	0.49
147	13.58	34.91	0.86	2.21	-	-	-	180										
196	12.75	34.88	0.76	2.35	-	-	-	167										

OBSERVED								COMP	INTERPOLATED								COMPUTED	
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton	ΔD' dyn m

SPENCER F. BAIRD; December 6, 1959; 1901 GCT; 8°18.5'N, 88°46.5'W; sounding, 1900 fm; wind, 030°, 13 kt; weather, partly cloudy; sea, missing; wire angle, 18°.

0	25.50	34.145	3.98	1.12	529	0	25.50	34.15	3.98	1.12	529	0.00
10	25.18	34.156	4.32	1.17	519	10	25.18	34.16	4.32	1.17	519	0.05
19	19.20	34.715	1.80	1.76	318	20	19.07	34.72	1.76	1.78	314	0.09
29	17.62	34.778	1.36	2.07	276	30	17.50	34.78	1.35	2.08	273	0.12
38	15.96	34.851	1.08	2.13	234	50	15.03	34.81	0.79	2.38	217	0.17
48	15.14	34.806	0.83	2.38	219	75	13.52	34.79	0.65	2.37	188	0.22
62	14.20	34.804	0.67	2.33	201	100	13.01	34.85	0.64	2.39	173	0.27
81	13.31	34.783	0.64	2.38	185	150	12.33	34.84	0.63	2.43	162	0.35
104	12.96	34.863	0.64	2.39	172	200	11.50	34.78	0.82	2.41	151	0.43
140	12.48	34.850	0.61	2.47	164	250	10.93	34.76	0.44	2.69	142	0.50
184	11.74	34.785	0.84	2.24	155	300	10.37	34.75	0.32	2.86	133	0.57
224	11.19	34.768	0.72	2.61	146	400	9.12	34.68	0.13	3.15	119	0.70
266	10.78	34.761	0.38	2.73	140	500	7.87	34.62	0.07	3.37	105	0.81
348	9.81	34.716	0.22	3.03	127	600	6.93	34.60	0.14	3.54	94	0.91
482	8.08	34.627	0.06	3.31	108	700	6.23	34.60	0.18	3.62	85	1.00
667	6.46	34.595	0.21	3.59	88	800	5.62	34.58	0.37	3.67	79	1.08
857	5.32	34.579	0.43	3.68	76	1000	4.63	34.58	0.58	3.72	68	1.23
1051	4.37	34.583	0.63	3.73	66							

STATION 50, SURFACE OBSERVATIONS OFF COCOS ISLAND, DECEMBER 3, 1959

Sta.	Time GCT	Latitude North	Longitude West	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	δ_T cl/ton
50-1	0013	05°21.9'	87°05.0'	27.2	32.96	4.72	0.50	-	-	-	665
2	0044	05°22.9'	87°08.4'	27.1	32.96	4.61	0.43	-	-	-	662
3	0105	05°23.9'	87°11.7'	26.9	32.96	4.66	0.46	-	-	-	656
4	0128	05°27.3'	87°12.7'	26.9	32.95	4.66	0.41	-	-	-	657
5	0152	05°30.6'	87°13.7'	27.0	32.96	4.65	0.41	-	-	-	659
6	0218	05°32.8'	87°11.6'	27.1	32.96	4.64	0.42	-	-	-	662
7	0239	05°35.0'	87°09.6'	27.0	32.96	4.66	0.45	-	-	-	659
8	0511	05°37.3'	87°07.2'	27.0	32.96	4.39	0.39	-	-	-	659
9	0533	05°39.4'	87°05.0'	26.8	32.98	4.47	0.43	-	-	-	652
10	0554	05°41.6'	87°02.9'	26.7	33.01	4.43	0.40	-	-	-	646
11	0615	05°40.7'	86°59.5'	26.9	33.03	4.32	0.46	-	-	-	651
12	0630	05°39.7'	86°51.1'	26.9	33.06	4.29	0.42	-	-	-	649
13	0652	05°36.3'	86°55.1'	26.9	33.02	4.55	0.44	-	-	-	652
14	0712	05°33.0'	86°54.2'	26.9	33.01	4.56	0.41	-	-	-	652
15	0733	05°30.8'	86°56.4'	26.9	32.99	4.54	0.41	-	-	-	654
16	0754	05°28.5'	86°58.4'	26.8	33.08	4.44	0.39	-	-	-	644
17	1210	05°26.3'	87°00.7'	26.7	33.00	4.66	0.58	-	-	-	647
18	1240	05°24.0'	87°02.9'	26.8	32.94	4.53	0.40	0.2	0.01	0.5	654
19	1257	05°24.5'	87°04.7'	26.6	32.94	4.52	0.39	1.2	0.01	0.6	648
20	1319	05°26.6'	87°04.6'	26.8	32.95	4.54	0.36	0.2	0.00	-	654
21	1329	05°27.5'	87°04.7'	26.8	32.97	4.54	0.39	0.2	0.03	0.5	652
22	1340	05°28.6'	87°04.7'	26.8	32.98	4.85	0.41	0.3	0.00	0.4	652
23	1357	05°29.6'	87°04.7'	26.7	33.07	4.72	0.39	0.4	0.00	-	642
24	1429	05°30.9'	87°04.7'	26.7	33.10	4.54	0.44	0.4	0.00	0.7	640
25	1450	05°30.2'	87°02.0'	26.7	33.10	4.40	-	0.2	0.00	-	640
26	1529	05°29.5'	87°01.4'	26.8	33.08	4.40	-	0.3	0.01	0.1	644
27	1544	05°28.7'	87°00.7'	26.8	33.07	4.76	-	0.1	0.00	-	645
28	1600	05°27.3'	86°59.2'	26.9	33.06	4.71	0.42	0.0	0.02	1.4	649
29	1650	05°32.2'	86°56.6'	27.0	33.01	-	0.45	1.1	0.00	0.2	656
30	1712	05°32.1'	86°58.6'	27.0	32.99	5.31	0.41	0.3	0.00	0.2	657
31	1727	05°32.1'	86°59.5'	27.1	32.99	4.66	0.50	0.2	0.00	0.2	660
32	1738	05°32.1'	87°00.5'	26.9	33.02	4.81	0.42	-	0.00	0.3	652
33	1800	05°32.2'	87°01.5'	26.7	33.11	4.64	0.46	0.6	0.00	0.1	639
34	1821	05°33.7'	87°02.6'	26.9	33.03	4.63	0.45	-	0.00	-	651
35	1840	05°34.5'	87°01.9'	26.9	32.98	4.45	0.38	0.5	0.04	0.2	655
36	1924	05°35.2'	87°01.2'	27.2	32.97	4.61	0.45	0.5	0.00	0.1	665
37	1904	05°35.8'	87°00.5'	27.2	33.01	4.70	0.44	0.4	0.00	0.2	662
38	1952	05°37.5'	86°59.1'	27.1	33.04	4.58	0.40	0.7	0.00	0.1	656
39	2100	05°36.6'	87°07.6'	27.2	32.99	4.40	0.37	0.1	0.00	0.4	663
40	2125	05°35.1'	86°06.3'	27.2	32.96	4.37	0.40	-	0.02	0.4	665
41	2135	05°34.4'	87°05.5'	27.2	32.98	4.40	0.43	0.6	0.01	0.4	664
42	2205	05°33.6'	87°05.0'	27.2	32.99	4.37	0.38	0.1	0.00	0.2	663
43	2218	05°33.0'	87°04.4'	27.2	32.98	4.35	0.38	-	0.00	-	664
44	2241	05°31.4'	87°06.0'	27.2	32.97	4.43	0.38	0.2	0.00	-	665
45	2252	05°31.0'	87°06.9'	27.1	32.96	4.43	0.38	-	0.00	0.5	662
46	2305	05°30.7'	87°07.8'	27.1	32.96	4.53	0.38	0.0	0.00	0.4	662
47	2315	05°30.3'	87°08.8'	27.1	32.96	4.46	0.34	-	0.00	0.6	662
48	2335	05°29.5'	87°10.6'	27.2	32.99	4.37	0.38	-	0.02	0.6	663

OBSERVATIONS OF THE BUREAU OF COMMERCIAL FISHERIES, SEATTLE

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m

1

PIONEER; April 24, 1959; 0517, 0655 GCT;[a] 56°01'N, 152°59'W; wind, 260°, 20 kt; weather, fog, depositing rime; sea, moderate.

0	5.1	32.60	-	25.79	0	5.1	32.60		25.79	222	0.00
9	5.02	32.59	7.54	25.79	10	5.03	32.59	7.47	25.79	222	0.02
19	5.00	32.58	6.90	25.78	20	4.97	32.58	6.82	25.79	222	0.04
28	4.74	32.61	6.35	25.83	30	4.70	32.61	6.42	25.84	217	0.07
48	4.38	32.64	6.73	25.90	50	4.32	32.63	6.76	25.89	212	0.11
71	4.20	32.70	6.45	25.96	75	4.40	32.78	6.08	26.00	202	0.16
96	5.32	33.18	4.47	26.22	100	5.54	33.28	4.22	26.27	177	0.21
120	6.14	33.62	3.34	26.47	150	5.71	33.76	2.81	26.63	144	0.29
144	5.79	33.74	3.00	26.61	200	5.09	33.85	1.76	26.78	130	0.36
192	5.18	33.84	1.83	26.76	250	4.65	33.90	1.47	26.87	122	0.42
240	4.72	33.89	1.49	26.85	300	4.40	33.97	1.30	26.95	114	0.48
288	4.44	33.95	1.37	26.93	400	4.12	34.05	0.88	27.04	106	0.59
					500	3.96	34.09	0.68	27.09	102	0.69
386	4.15	34.05	0.92	27.04	600	3.77	34.15	0.57	27.16	97	0.79
485	3.98	34.08	0.71	27.08	700	3.46	34.23	0.52	27.25	88	0.88
538	3.90	34.11	0.64	27.11							
703	3.45	34.23	0.52	27.25							

2

PIONEER; April 24, 1959; 2355 GCT; 55°23'N, 153°07'W; wind, 280°, 13 kt; weather, overcast; sea, moderate.

0	5.2	32.74	-	25.89	0	5.2	32.74		25.89	212	0.00
9	4.64	32.71	7.94	25.92	10	4.54	32.72	7.85	25.94	207	0.02
19	3.96	32.78	7.30	26.05	20	3.97	32.78	7.28	26.05	197	0.04
29	3.99	32.81	7.16	26.07	30	3.98	32.81	7.16	26.07	195	0.06
48	3.74	32.84	7.12	26.12	50	3.65	32.82	7.21	26.11	191	0.10
73	3.45	32.87	7.02	26.17	75	3.66	32.93	6.76	26.20	183	0.15
98	4.96	33.47	4.14	26.49	100	4.85	33.50	3.92	26.53	153	0.19
122	4.08	33.73	2.05	26.79	150	4.07	33.88	1.24	26.91	116	0.26
146	4.08	33.87	1.31	26.90	200	3.96	33.97	0.64	26.99	109	0.31
195	3.96	33.96	0.66	26.99	250	3.94	34.03	0.50	27.04	105	0.36
244	3.94	34.02	0.52	27.04	300	3.90	34.06	0.44	27.07	102	0.42
318	3.88	34.06	0.43	27.07							

3

PIONEER; April 25, 1959; 0428, 0519 GCT; 55°00'N, 153°00'W; wind, 250°, 30 kt; weather, overcast; sea, rough.

0	4.2	32.86	-	26.09	0	4.2	32.86		26.09	193	0.00
10	4.12	32.86	7.45	26.10	10	4.12	32.86	7.45	26.10	192	0.02
19	4.08	32.86	7.50	26.10	20	4.08	32.86	7.49	26.10	192	0.04
29	4.00	32.85	7.39	26.10	30	3.97	32.85	7.37	26.10	192	0.06
48	3.58	32.88	7.17	26.17	50	3.54	32.89	7.17	26.18	185	0.10
73	3.21	32.97	7.22	26.27	75	3.15	32.95	7.39	26.26	177	0.14
97	3.01	33.02	7.30	26.33	100	3.16	33.11	6.66	26.39	165	0.18
121	3.90	33.59	3.21	26.70	150	4.14	33.90	1.49	26.92	116	0.25
143	4.15	33.89	1.55	26.91	200	4.04	33.96	1.16	26.98	110	0.31
					250	3.94	34.02	0.90	27.04	105	0.36
394	3.71	34.15	0.44	27.16	300	3.86	34.07	0.68	27.08	101	0.42
494	3.58	34.21	0.40	27.22	400	3.70	34.15	0.44	27.16	94	0.51
694	3.22	34.31	0.38	27.34	500	3.57	34.21	0.40	27.22	89	0.61
1043	2.70	34.40	0.50	27.46	600	3.38	34.27	0.38	27.29	84	0.69
					700	3.21	34.31	0.38	27.34	80	0.78
					800	3.05	34.35	0.39	27.38	76	0.85
					1000	2.76	34.39	0.48	27.44	71	1.00

a) Times are reported in the order of casts; the deep casts were taken first.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
4	PIONEER; May 6, 1959; 0408, 0518 GCT; 53°30'N, 165°00'W; wind, 360°, 12 kt; weather, cloudy; sea, moderate.											
	0	4.0	32.37	-	25.72	0	4.0	32.37		25.72	228	0.00
	10	3.92	32.34	8.03	25.70	10	3.92	32.34	8.03	25.70	230	0.02
	20	3.86	32.34	7.97	25.71	20	3.86	32.34	7.97	25.71	229	0.05
	29	3.84	32.34	7.94	25.71	30	3.84	32.34	7.94	25.71	229	0.07
	49	3.86	32.36	7.84	25.73	50	3.86	32.36	7.84	25.73	228	0.12
	73	3.88	32.38	7.67	25.74	75	3.85	32.39	7.58	25.75	226	0.17
	98	3.70	32.52	6.83	25.87	100	3.72	32.53	6.80	25.87	214	0.23
	122	3.97	32.62	6.48	25.92	150	4.26	32.81	6.18	26.04	199	0.33
	146	4.18	32.76	6.36	26.01	200	5.07	33.36	4.20	26.39	166	0.42
	195	5.00	33.31	4.40	26.36	250	5.35	33.74	2.80	26.66	142	0.50
	244	5.38	33.72	2.86	26.64	300	4.88	33.89	2.07	26.83	126	0.56
	293	5.00	33.87	2.24	26.80	400	4.18	34.01	0.97	27.00	110	0.68
						500	3.88	34.09	0.57	27.10	102	0.79
	331	4.46	33.95	1.44	26.93	600	3.71	34.15	0.50	27.16	96	0.89
	422	4.10	34.03	0.85	27.03							
	610	3.70	34.16	0.52	27.17							
5	PIONEER; May 7, 1959, 0301, 0355 GCT; 53°00'N, 165°00'W; wind, 180°, 35 kt; weather, overcast; sea, moderate.											
	0	4.5	32.74	-	25.96	0	4.5	32.74		25.96	205	0.00
	8	4.51	32.73	8.03	25.95	10	4.49	32.73	8.02	25.96	206	0.02
	16	4.46	32.73	8.00	25.96	20	4.49	32.73	8.02	25.96	206	0.04
	25	4.46	32.73	7.97	25.96	30	4.29	34.76	7.76	26.00	202	0.06
	41	3.96	32.83	7.37	26.09	50	3.71	32.90	7.16	26.17	186	0.10
	62	3.48	32.96	6.98	26.24	75	3.36	32.99	7.01	26.27	176	0.15
	82	3.34	33.01	6.96	26.29	100	3.36	33.09	6.72	26.35	169	0.19
	102	3.42	33.12	6.55	26.37	150	4.09	33.79	2.23	26.84	123	0.26
	123	4.64	33.71	2.99	26.72	200	3.93	33.91	1.34	26.95	113	0.32
	163	3.94	33.82	1.94	26.88	250	3.74	33.94	1.03	26.99	109	0.38
	204	3.92	33.92	1.30	26.96	300	3.81	34.03	0.73	27.06	104	0.43
	245	3.73	33.93	1.06	26.99	400	3.78	34.13	0.47	27.14	97	0.53
						500	3.60	34.19	0.41	27.20	91	0.62
	361	3.83	34.11	0.50	27.12	600	3.40	34.25	0.38	27.27	85	0.71
	457	3.70	34.16	0.44	27.17	700	3.25	34.31	0.32	27.33	80	0.80
	650	3.30	34.28	0.38	27.31	800	3.11	34.37	0.30	27.39	75	0.87
	991	2.76	34.41	0.56	27.46	1000	(2.74)	(34.41)	(0.58)	(27.46)	(69)	(1.02)
6	PIONEER; May 20, 1959; 0434, 0541 GCT; 51°29'N, 175°03'E; wind, 300°, 10 kt; weather, overcast; sea, slight.											
	0	4.8	32.77	-	25.95	0	4.8	32.77		25.95	206	0.00
	10	4.82	32.75	8.53	25.94	10	4.82	32.75	8.53	25.94	208	0.02
	20	4.63	32.75	8.23	25.96	20	4.63	32.75	8.23	25.96	206	0.04
	29	4.50	32.75	7.88	25.97	30	4.48	32.75	7.85	25.97	204	0.06
	49	4.13	32.84	7.34	26.08	50	4.10	32.84	7.32	26.08	194	0.10
	74	3.63	32.95	7.17	26.22	75	3.61	32.95	7.20	26.22	181	0.15
	99	3.44	33.03	7.21	26.30	100	3.45	33.03	7.15	26.30	174	0.19
	124	3.74	33.21	5.32	26.41	150	3.98	33.65	2.88	26.74	133	0.27
	149	3.98	33.64	2.93	26.73	200	4.02	33.90	1.06	26.93	115	0.33
	198	4.02	33.90	1.08	26.93	250	3.90	33.97	0.68	27.00	109	0.39
	248	3.91	33.97	0.71	27.00	300	3.80	34.02	0.27	27.05	104	0.44
	298	3.80	34.02	0.27	27.05	400	3.67	34.11	0.22	27.13	97	0.54
						500	3.58	34.18	0.17	27.20	92	0.64
	391	3.68	34.10	0.24	27.13	600	3.42	34.25	0.13	27.27	86	0.73
	490	3.60	34.17	0.17	27.19	700	3.26	34.31	0.13	27.33	80	0.81
	689	3.28	34.30	0.13	27.32	800	3.11	34.35	0.16	27.38	76	0.89
	1038	2.76	34.40	0.29	27.45	1000	2.81	34.40	0.26	27.45	71	1.03

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; May 21, 1959; 0221, 0313 GCT; 51°00'N, 175°00'E; wind, 140°, 16 kt; weather, overcast; sea, rough.											7
0	4.7	32.73	-	25.93	0	4.7	32.73		25.93	208	0.00
9	4.71	32.70	6.89	25.91	10	4.69	32.71	6.70	25.92	209	0.02
19	4.56	32.76	5.95	25.97	20	4.56	32.76	6.12	25.97	204	0.04
28	4.53	32.80	7.02	26.01	30	4.49	32.81	6.91	26.02	200	0.06
47	4.20	32.88	6.08	26.10	50	4.15	32.88	5.95	26.11	192	0.10
71	3.84	32.93	5.29	26.18	75	3.77	32.95	5.28	26.20	183	0.15
95	3.60	33.07	5.13	26.31	100	3.67	33.08	5.13	26.32	172	0.19
119	3.85	33.21	4.70	26.40	150	3.94	33.63	2.86	26.73	134	0.27
143	3.88	33.57	3.16	26.68	200	4.04	33.87	1.37	26.91	117	0.33
192	4.10	33.86	1.50	26.89	250	3.88	33.94	0.77	26.98	111	0.39
241	3.85	33.92	0.83	26.97	300	3.91	34.02	0.60	27.04	106	0.44
290	3.94	34.01	0.59	27.03	400	3.68	34.10	0.63	27.13	98	0.54
					500	3.52	34.15	0.54	27.18	93	0.64
375	3.72	34.09	0.65	27.11	600	3.37	34.22	0.49	27.25	87	0.73
471	3.56	34.13	0.56	27.16	700	3.22	34.28	0.47	27.31	82	0.82
670	3.27	34.26	0.47	27.29	800	3.07	34.32	0.47	27.36	78	0.90
1009	2.74	34.39	0.56	27.44	1000	2.75	34.39	0.55	27.44	71	1.04
PIONEER; May 23, 1959; 0136 GCT; 50°30'N, 175°00'E; wind, calm; weather, fog; sea, smooth.											8
0	5.8	32.92	-	25.96	0	5.8	32.92		25.96	206	0.00
10	4.58	32.90	7.85	26.08	10	4.58	32.90	7.85	26.08	194	0.02
20	4.36	32.97	7.50	26.16	20	4.36	32.97	7.50	26.16	187	0.04
30	4.30	32.98	7.47	26.17	30	4.30	32.98	7.47	26.17	185	0.06
50	4.18	32.98	7.41	26.19	50	4.18	32.98	7.41	26.19	184	0.10
75	3.68	33.01	7.37	26.26	75	3.68	33.01	7.37	26.26	178	0.14
100	3.10	33.10	7.13	26.38	100	3.10	33.10	7.13	26.38	166	0.18
125	3.46	33.37	5.14	26.57	150	4.02	33.78	1.98	26.84	123	0.26
150	4.02	33.78	1.98	26.84	200	4.02	33.93	0.90	26.96	113	0.31
200	4.02	33.93	0.90	26.96	250	3.90	34.01	0.59	27.03	106	0.37
250	3.90	34.01	0.59	27.03	300	3.81	34.06	0.63	27.08	102	0.42
325	3.77	34.08	0.77	27.10							
PIONEER; May 23, 1959; 0623, 0816 GCT; 50°00'N, 175°00'E; wind, 240°, 4 kt; weather, fog; sea, slight.											9
0	4.9	32.95	-	26.09	0	4.9	32.95		26.09	194	0.00
10	4.34	32.95	7.38	26.15	10	4.34	32.95	7.38	26.15	188	0.02
20	4.15	32.96	7.53	26.17	20	4.15	32.96	7.53	26.17	185	0.04
30	4.12	32.96	7.47	26.18	30	4.12	32.96	7.47	26.18	185	0.06
50	4.06	32.96	7.44	26.18	50	4.06	32.96	7.44	26.18	185	0.09
75	3.80	32.99	7.32	26.23	75	3.80	32.99	7.32	26.23	180	0.14
99	3.23	33.07	7.20	26.35	100	3.23	33.08	7.11	26.36	168	0.18
124	3.40	33.38	4.92	26.58	150	3.78	33.73	2.31	26.82	125	0.26
149	3.78	33.72	2.34	26.81	200	3.75	33.94	1.00	26.99	109	0.32
199	3.75	33.94	1.01	26.99	250	3.71	34.01	0.65	27.05	104	0.37
249	3.71	34.01	0.65	27.05	300	3.76	34.10	0.63	27.12	98	0.42
299	3.76	34.10	0.63	27.12	400	3.62	34.17	0.49	27.19	92	0.51
					500	3.42	34.23	0.45	27.25	86	0.60
392	3.63	34.17	0.50	27.19	600	3.21	34.29	0.49	27.32	80	0.68
492	3.44	34.23	0.45	27.25	700	3.01	34.33	0.53	27.37	76	0.76
692	3.03	34.33	0.53	27.37	800	2.84	34.38	0.57	27.43	71	0.84
1042	2.47	34.46	0.65	27.52	1000	2.53	34.45	0.64	27.51	64	0.97

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
10	PIONEER; May 24, 1959; 0227 GCT; 49°27'N, 175°05'E; wind, 240°, 2 kt; weather, overcast; sea, slight.											
	0	4.9	33.04	-	26.16	0	4.9	33.04		26.16	187	0.00
	10	4.30	33.04	7.49	26.22	10	4.30	33.04	7.49	26.22	181	0.02
	20	4.14	33.03	7.46	26.23	20	4.14	33.03	7.46	26.23	180	0.04
	30	4.04	33.03	7.53	26.24	30	4.04	33.03	7.53	26.24	179	0.05
	50	3.78	33.04	7.40	26.27	50	3.78	33.04	7.40	26.27	176	0.09
	75	3.58	33.06	7.22	26.31	75	3.58	33.06	7.22	26.31	173	0.13
	100	3.32	33.21	6.24	26.45	100	3.32	33.21	6.24	26.45	159	0.18
	124	3.84	33.68	2.73	26.78	150	3.77	33.84	1.71	26.91	116	0.24
	149	3.78	33.84	1.72	26.91	200	3.53	33.92	1.13	27.00	108	0.30
	199	3.52	33.92	1.14	27.00	250	3.74	34.02	0.63	27.06	103	0.35
	248	3.74	34.02	0.64	27.06	300	3.75	34.08	0.50	27.10	99	0.40
	323	3.68	34.10	0.58	27.13							
11	PIONEER; May 24, 1959; 0714, 0839 GCT; 49°00'N, 175°00'E; wind, 320°, 4 kt; weather, fog; sea, smooth.											
	0	4.7	32.98	-	26.13	0	4.7	32.98		26.13	189	0.00
	10	4.48	32.98	7.34	26.15	10	4.48	32.98	7.34	26.15	187	0.02
	20	4.22	32.99	7.47	26.19	20	4.22	32.99	7.47	26.19	184	0.04
	30	4.14	32.98	7.44	26.19	30	4.14	32.98	7.44	26.19	184	0.06
	50	3.70	33.00	7.36	26.25	50	3.70	33.00	7.36	26.25	178	0.09
	74	3.54	33.01	7.47	26.27	75	3.53	33.01	7.47	26.27	176	0.14
	99	3.34	33.02	7.24	26.30	100	3.32	33.02	7.24	26.30	174	0.18
	123	3.04	33.12	6.70	26.41	150	2.98	33.46	4.87	26.68	138	0.26
	148	2.97	33.44	5.02	26.67	200	3.24	33.79	2.24	26.92	116	0.32
	200	3.24	33.79	2.24	26.92	250	3.36	33.90	1.43	27.00	109	0.38
	250	3.36	33.90	1.43	27.00	300	3.40	33.98	1.08	27.06	103	0.43
	300	3.40	33.98	1.08	27.06	400	3.42	34.13	0.81	27.17	93	0.53
						500	3.29	34.20	0.76	27.24	87	0.62
	389	3.44	34.12	0.81	27.16	600	3.16	34.27	0.73	27.31	81	0.70
	488	3.30	34.19	0.77	27.23	700	3.03	34.33	0.71	27.37	76	0.78
	688	3.05	34.32	0.71	27.36	800	2.90	34.37	0.69	27.41	73	0.86
	1036	2.58	34.44	0.72	27.50	1000	2.63	34.43	0.71	27.49	66	0.99
12	PIONEER; May 25, 1959; 0211 GCT; 48°31'N, 174°58'E; wind, 240°, 2 kt; weather, overcast; sea, smooth.											
	0	5.0	32.97	-	26.09	0	5.0	32.97		26.09	193	0.00
	10	4.73	32.97	7.28	26.12	10	4.73	32.97	7.28	26.12	190	0.02
	20	4.28	32.97	7.48	26.17	20	4.28	32.97	7.48	26.17	186	0.04
	29	4.18	32.98	7.43	26.19	30	4.18	32.98	7.43	26.19	184	0.06
	49	4.10	33.00	7.36	26.21	50	4.09	33.00	7.35	26.21	182	0.09
	73	3.85	33.01	7.28	26.24	75	3.84	33.01	7.30	26.24	179	0.14
	97	3.66	33.02	7.36	26.27	100	3.59	33.02	7.41	26.28	176	0.18
	122	3.17	33.11	7.13	26.39	150	2.91	33.43	5.19	26.66	139	0.26
	146	2.90	33.41	5.36	26.65	200	3.11	33.70	3.07	26.86	121	0.33
	196	3.07	33.68	3.25	26.85	250	3.47	33.89	1.37	26.98	110	0.38
	245	3.44	33.87	1.49	26.97	300	3.64	34.00	0.69	27.05	104	0.44
	319	3.66	34.03	0.72	27.07							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

PIONEER; May 25, 1959; 0719, 0820 GCT; 48°00'N, 175°00'E; wind, 280°, 10 kt; weather, overcast; sea, slight. 13

0	5.1	32.98	-	26.09	0	5.1	32.98		26.09	193	0.00
10	4.92	32.97	7.32	26.10	10	4.92	32.97	7.32	26.10	192	0.02
19	4.54	32.98	7.30	26.15	20	4.54	32.98	7.31	26.15	188	0.04
29	4.50	32.98	7.43	26.15	30	4.48	32.98	7.44	26.15	187	0.06
49	4.18	33.00	7.50	26.20	50	4.18	33.00	7.50	26.20	183	0.09
73	3.97	33.04	7.40	26.25	75	3.90	33.04	7.39	26.26	177	0.14
98	3.29	33.14	6.94	26.40	100	3.24	33.15	6.87	26.41	163	0.18
123	2.91	33.35	5.66	26.60	150	3.09	33.62	3.61	26.80	127	0.25
148	3.08	33.61	3.67	26.79	200	3.30	33.82	2.26	26.94	114	0.31
197	3.30	33.81	2.31	26.93	250	3.33	33.92	1.61	27.02	107	0.37
247	3.33	33.91	1.66	27.01	300	3.41	33.99	1.01	27.06	103	0.42
297	3.40	33.99	1.02	27.06	400	3.49	34.13	0.67	27.17	94	0.52
					500	3.33	34.21	0.65	27.25	87	0.61
392	3.50	34.12	0.67	27.16	600	3.20	34.26	0.65	27.30	83	0.69
491	3.34	34.20	0.65	27.24	700	3.07	34.31	0.66	27.35	78	0.77
690	3.08	34.31	0.66	27.35	800	2.92	34.36	0.67	27.40	74	0.85
1038	2.56	34.44	0.71	27.50	1000	2.62	34.43	0.69	27.49	66	0.99

PIONEER; May 26, 1959; 1947 GCT; 49°02'N, 172°59'E; wind, 300°, 6 kt; weather, clear; sea, slight. 14

0	5.1	32.99	-	26.09	0	5.1	32.99		26.09	193	0.00
10	4.89	32.99	7.39	26.12	10	4.89	32.99	7.39	26.12	190	0.02
20	4.85	32.99	7.43	26.12	20	4.85	32.99	7.43	26.12	190	0.04
30	4.27	32.99	7.52	26.18	30	4.27	32.99	7.52	26.18	184	0.06
50	3.97	33.01	7.45	26.23	50	3.97	33.01	7.45	26.23	180	0.09
75	3.50	33.05	7.30	26.31	75	3.50	33.05	7.30	26.31	173	0.14
99	3.11	33.21	6.73	26.47	100	3.15	33.23	6.55	26.48	156	0.18
124	3.85	33.62	3.20	26.73	150	3.97	33.85	1.56	26.90	118	0.25
149	3.97	33.85	1.57	26.90	200	3.82	33.96	0.99	27.00	108	0.30
199	3.83	33.96	0.99	27.00	250	3.58	33.99	0.87	27.05	104	0.36
249	3.58	33.99	0.87	27.05	300	3.47	34.03	0.76	27.09	100	0.41
323	3.46	34.06	0.72	27.11							

PIONEER; May 27, 1959; 0538, 0639 GCT; 49°38'N, 171°44'E; wind, 280°, 18 kt; weather, partly cloudy; sea, slight. 15

0	5.2	32.98	-	26.08	0	5.2	32.98		26.08	194	0.00
10	5.10	32.98	7.57	26.09	10	5.10	32.98	7.57	26.09	193	0.02
20	4.82	32.97	7.52	26.11	20	4.82	32.97	7.52	26.11	191	0.04
30	4.47	33.00	7.68	26.17	30	4.47	33.00	7.68	26.17	186	0.06
50	3.96	33.02	7.48	26.24	50	3.96	33.02	7.48	26.24	179	0.09
75	3.19	33.11	7.21	26.38	75	3.19	33.11	7.21	26.38	166	0.14
100	3.26	33.32	5.67	26.54	100	3.26	33.32	5.67	26.54	150	0.18
125	3.72	33.68	2.87	26.79	150	3.88	33.86	1.51	26.91	116	0.24
150	3.88	33.86	1.51	26.91	200	3.84	33.99	0.83	27.02	106	0.30
200	3.84	33.99	0.83	27.02	250	3.83	34.00	0.68	27.03	106	0.35
249	3.83	34.00	0.68	27.03	300	3.80	34.06	0.59	27.08	101	0.40
299	3.80	34.06	0.59	27.08	400	3.69	34.12	0.52	27.14	97	0.50
					500	3.56	34.18	0.48	27.20	92	0.60
387	3.70	34.11	0.52	27.13	600	3.29	34.27	0.45	27.30	83	0.68
487	3.60	34.17	0.49	27.19	700	3.03	34.35	0.46	27.39	75	0.76
687	3.06	34.34	0.46	27.38	800	2.79	34.41	0.52	27.46	68	0.83
1036	2.31	34.50	0.81	27.57	1000	2.38	34.49	0.75	27.55	59	0.96

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
16	PIONEER; May 28, 1959; 0218 GCT; 50°05'N, 171°30'E; wind, 320°, 12 kt; weather, fog in patches; sea, slight.											
	0	5.0	33.01	-	26.12	0	5.0	33.01		26.12	190	0.00
	10	4.99	32.98	7.50	26.10	10	4.99	32.98	7.50	26.10	192	0.02
	19	4.91	32.98	7.50	26.11	20	4.90	32.98	7.49	26.11	191	0.04
	29	4.75	32.99	7.41	26.13	30	4.71	32.99	7.41	26.14	189	0.06
	48	4.04	33.01	7.38	26.22	50	3.96	33.01	7.43	26.23	180	0.09
	73	3.36	33.12	7.30	26.38	75	3.34	33.14	7.30	26.39	165	0.14
	97	3.32	33.38	6.06	26.59	100	3.41	33.45	5.40	26.63	142	0.18
	121	3.83	33.78	2.11	26.86	150	3.89	33.91	1.22	26.95	112	0.24
	145	3.90	33.90	1.30	26.94	200	3.81	34.01	0.72	27.04	104	0.29
	194	3.82	34.01	0.74	27.04	250	3.75	34.06	0.57	27.09	100	0.34
	243	3.76	34.05	0.58	27.08	300	3.70	34.12	0.49	27.14	96	0.39
	317	3.68	34.14	0.49	27.16							
17	PIONEER; May 28, 1959; 0600, 0652 GCT; 50°25'N, 171°20'E; wind, 320°, 10 kt; weather, overcast; sea, moderate.											
	0	5.0	32.99	-	26.11	0	5.0	32.99		26.11	192	0.00
	10	5.02	32.96	7.50	26.08	10	5.02	32.96	7.50	26.08	194	0.02
	20	4.96	32.98	7.49	26.10	20	4.96	32.98	7.49	26.10	192	0.04
	30	4.60	32.98	7.46	26.14	30	4.60	32.98	7.46	26.14	188	0.06
	50	4.06	33.07	7.49	26.27	50	4.06	33.07	7.49	26.27	176	0.09
	75	3.59	33.06	7.36	26.31	75	3.59	33.06	7.36	26.31	173	0.14
	100	3.24	33.25	6.29	26.49	100	3.24	33.25	6.29	26.49	156	0.18
	125	3.70	33.65	3.17	26.77	150	3.88	33.86	1.59	26.91	116	0.25
	150	3.88	33.86	1.59	26.91	200	3.80	33.97	0.83	27.01	107	0.30
	199	3.80	33.97	0.83	27.01	250	3.65	34.03	0.72	27.07	102	0.35
	249	3.65	34.03	0.72	27.07	300	3.66	34.12	0.58	27.14	96	0.40
	299	3.66	34.12	0.58	27.14	400	3.53	34.18	0.52	27.20	90	0.50
						500	3.38	34.25	0.53	27.27	84	0.58
	385	3.55	34.17	0.52	27.19	600	3.23	34.29	0.50	27.32	81	0.67
	485	3.40	34.24	0.54	27.26	700	3.08	34.34	0.50	27.37	76	0.74
	685	3.10	34.33	0.50	27.36	800	2.93	34.38	0.54	27.42	72	0.82
	1034	2.57	34.46	0.72	27.51	1000	2.62	34.45	0.68	27.50	65	0.96
18	PIONEER; May 29, 1959; 0145 GCT; 50°59'N, 171°08'E; wind, 040°, 8 kt; weather, overcast; sea, moderate.											
	0	5.0	32.98	-	26.10	0	5.0	32.98		26.10	192	0.00
	10	4.80	32.96	7.50	26.10	10	4.80	32.96	7.50	26.10	192	0.02
	20	4.76	32.96	7.53	26.11	20	4.76	32.96	7.53	26.11	191	0.04
	29	4.72	32.96	7.67	26.11	30	4.70	32.96	7.67	26.12	191	0.06
	49	4.26	32.95	-	26.15	50	4.23	32.95	7.59	26.16	187	0.10
	73	3.78	32.98	7.15	26.23	75	3.74	32.99	7.10	26.24	180	0.14
	97	3.62	33.16	6.26	26.38	100	3.69	33.19	6.04	26.40	164	0.18
	122	4.06	33.41	4.63	26.54	150	4.24	33.60	3.29	26.67	139	0.26
	147	4.26	33.58	3.43	26.65	200	4.03	33.88	1.57	26.92	116	0.32
	195	4.04	33.86	1.69	26.90	250	3.96	34.01	0.68	27.03	106	0.38
	245	3.97	34.00	0.74	27.02	300	3.89	34.05	0.45	27.06	103	0.43
	318	3.86	34.05	0.53	27.07							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; May 29, 1959; 0637, 0732 GCT; 51°30'N, 171°00'E; wind, 060°, 16 kt; weather, cloudy; sea, moderate.											19
0	4.8	32.98	-	26.12	0	4.8	32.98		26.12	190	0.00
10	4.80	32.98	7.55	26.12	10	4.80	32.98	7.55	26.12	190	0.02
20	4.76	32.98	7.44	26.12	20	4.76	32.98	7.44	26.12	190	0.04
30	4.62	33.00	7.43	26.16	30	4.62	33.00	7.43	26.16	187	0.06
50	2.54	33.11	7.48	26.44	50	2.54	33.11	7.48	26.44	160	0.09
75	1.94	33.13	7.64	26.50	75	1.94	33.13	7.64	26.50	154	0.13
99	1.47	33.15	7.54	26.55	100	1.51	33.16	7.47	26.56	149	0.17
124	2.60	33.39	5.47	26.66	150	4.14	33.75	2.48	26.80	127	0.24
149	4.14	33.74	2.51	26.79	200	4.01	33.93	1.27	26.96	112	0.30
198	4.04	33.93	1.28	26.95	250	3.66	33.96	0.99	27.02	107	0.35
248	3.65	33.96	1.01	27.02	300	3.85	34.04	0.59	27.06	103	0.41
298	3.85	34.04	0.59	27.06	400	3.67	34.14	0.53	27.16	95	0.50
					500	3.52	34.20	0.48	27.22	90	0.60
380	3.70	34.13	0.54	27.15	600	3.36	34.26	0.46	27.28	84	0.68
477	3.56	34.19	0.49	27.21	700	3.20	34.31	0.45	27.34	80	0.77
674	3.24	34.30	0.45	27.33	800	3.04	34.36	0.46	27.39	75	0.84
1020	2.70	34.43	0.57	27.48	1000	2.73	34.42	0.56	27.47	68	0.99
PIONEER; June 3, 1959; 0451, 0611 GCT; 52°00'N, 171°00'E; wind, 260°, 4 kt; weather, overcast; sea, smooth.											20
0	5.0	33.04	-	26.15	0	5.0	33.04		26.15	188	0.00
10	4.56	33.03	7.48	26.19	10	4.56	33.03	7.48	26.19	184	0.02
20	4.39	33.04	7.56	26.21	20	4.39	33.04	7.56	26.21	182	0.04
30	4.34	33.04	7.55	26.22	30	4.34	33.04	7.55	26.22	181	0.06
50	4.12	33.03	7.66	26.23	50	4.12	33.03	7.66	26.23	180	0.09
75	3.28	33.04	7.54	26.32	75	3.28	33.04	7.54	26.32	172	0.14
100	2.69	33.09	7.44	26.41	100	2.69	33.09	7.44	26.41	163	0.18
125	2.23	33.15	7.12	26.50	150	2.29	33.23	6.56	26.56	149	0.26
150	2.29	33.23	6.56	26.56	200	3.30	33.59	3.52	26.76	131	0.32
200	3.30	33.59	3.52	26.76	250	3.78	33.86	1.58	26.92	116	0.39
250	3.78	33.86	1.58	26.92	300	3.85	33.94	0.85	26.98	111	0.44
300	3.85	33.94	0.85	26.98	400	3.78	34.12	0.36	27.13	98	0.55
					500	3.39	34.26	0.37	27.28	84	0.64
392	3.81	34.11	0.36	27.12	600	3.08	34.33	0.44	27.37	76	0.72
492	3.42	34.25	0.36	27.27	700	2.82	34.39	0.53	27.44	70	0.79
692	2.84	34.39	0.52	27.43	800	2.60	34.45	0.62	27.50	64	0.86
1042	2.27	34.52	0.86	27.59	1000	2.31	34.51	0.82	27.58	57	0.98
PIONEER; June 4, 1959; 0455, 0546 GCT; 52°47'N, 171°00'E; wind, 250°, 10 kt; weather, overcast; sea, smooth.											21
0	5.6	32.81	-	25.89	0	5.6	32.81		25.89	212	0.00
10	5.50	32.82	8.20	25.91	10	5.50	32.82	8.20	25.91	210	0.02
20	5.28	32.87	7.85	25.98	20	5.28	32.87	7.85	25.98	204	0.04
30	5.16	32.87	7.73	25.99	30	5.16	32.87	7.73	25.99	202	0.06
50	4.06	32.92	7.36	26.15	50	4.06	32.92	7.36	26.15	188	0.10
75	3.52	32.98	6.74	26.25	75	3.52	32.98	6.74	26.25	178	0.15
100	3.63	33.18	5.89	26.40	100	3.63	33.18	5.89	26.40	164	0.19
125	4.52	33.60	3.19	26.64	150	4.38	33.80	1.99	26.82	126	0.26
150	4.38	33.80	1.99	26.82	200	4.08	33.94	1.08	26.96	112	0.32
200	4.08	33.94	1.08	26.96	250	3.94	33.99	0.86	27.01	108	0.38
250	3.94	33.99	0.86	27.01	300	3.80	34.04	0.78	27.07	103	0.43
300	3.80	34.04	0.78	27.07	400	3.62	34.12	0.56	27.15	96	0.53
					500	3.48	34.19	0.53	27.22	90	0.62
384	3.65	34.11	0.56	27.14	600	3.35	34.24	0.50	27.27	86	0.71
483	3.50	34.18	0.54	27.21	700	3.21	34.29	0.49	27.32	81	0.79
681	3.24	34.28	0.49	27.31	800	3.08	34.33	0.49	27.37	78	0.87
1028	2.78	34.40	0.53	27.45	1000	2.82	34.39	0.52	27.44	71	1.02

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
22	PIONEER; June 5, 1959; 0416, 0530 GCT; 53°30'N, 171°00'E; wind, 280°, 10 kt; weather, overcast; sea, smooth.										
0	5.1	32.97	-	26.08	0	5.1	32.97		26.08	194	0.00
10	5.04	32.95	7.96	26.07	10	5.04	32.95	7.96	26.07	195	0.02
20	4.71	32.94	7.87	26.10	20	4.71	32.94	7.87	26.10	192	0.04
30	4.60	32.95	7.65	26.12	30	4.60	32.95	7.65	26.12	191	0.06
50	3.58	33.03	7.50	26.28	50	3.58	33.03	7.50	26.28	175	0.09
75	2.83	33.07	7.30	26.38	75	2.83	33.07	7.30	26.38	166	0.14
100	2.48	33.20	6.47	26.52	100	2.48	33.20	6.47	26.52	153	0.18
125	2.82	33.33	5.47	26.59	150	3.28	33.58	3.75	26.75	131	0.25
150	3.28	33.58	3.75	26.75	200	3.84	33.79	1.94	26.86	121	0.31
200	3.84	33.79	1.94	26.86	250	3.84	33.92	1.15	26.97	112	0.37
250	3.84	33.92	1.15	26.97	300	3.74	34.03	0.72	27.06	103	0.42
300	3.74	34.03	0.72	27.06	400	3.69	34.06	0.65	27.09	101	0.52
					500	3.53	34.19	0.59	27.21	90	0.62
392	3.70	34.05	0.65	27.08	600	3.37	34.23	0.54	27.26	87	0.71
492	3.54	34.19	0.59	27.21	700	3.22	34.27	0.50	27.30	83	0.80
691	3.23	34.27	0.50	27.30	800	3.07	34.31	0.49	27.35	79	0.88
1041	2.74	34.40	0.54	27.45	1000	2.79	34.39	0.53	27.44	71	1.03
23	PIONEER; June 6, 1959; 0224 GCT; 53°56'N, 171°00'E; wind, 340°, 15 kt; weather, overcast; sea, rough.										
0	4.5	33.14	-	26.28	0	4.5	33.14		26.28	175	0.00
9	4.40	33.14	7.82	26.29	10	4.41	33.14	7.80	26.29	174	0.02
19	4.24	33.14	7.76	26.31	20	4.15	33.14	7.80	26.32	172	0.03
28	3.52	33.16	7.97	26.39	30	3.36	33.16	7.96	26.41	163	0.05
46	2.44	33.18	7.66	26.50	50	2.41	33.19	7.44	26.51	153	0.08
71	2.34	33.25	6.50	26.57	75	2.37	33.27	6.40	26.58	147	0.12
96	2.41	33.34	5.82	26.63	100	2.28	33.33	5.80	26.64	142	0.16
121	2.24	33.36	5.13	26.66	150	3.51	33.64	3.02	26.78	129	0.22
144	3.49	33.61	3.27	26.75	200	3.63	33.82	1.65	26.91	117	0.28
192	3.62	33.80	1.74	26.89	250	3.64	33.91	1.19	26.98	111	0.34
240	3.64	33.89	1.27	26.96	300	3.58	33.98	0.91	27.04	105	0.40
313	3.56	33.99	0.86	27.05							
24	PIONEER; June 6, 1959; 0659, 0750 GCT; 54°20'N, 171°00'E; wind, 340°, 13 kt; weather, overcast; sea, moderate.										
0	4.7	33.08	-	26.21	0	4.7	33.08		26.21	182	0.00
10	4.72	33.08	7.65	26.21	10	4.72	33.08	7.65	26.21	182	0.02
20	4.24	33.11	8.05	26.28	20	4.24	33.11	8.05	26.28	175	0.04
30	3.59	33.16	8.27	26.39	30	3.59	33.16	8.27	26.39	165	0.05
50	2.93	33.18	7.72	26.46	50	2.93	33.18	7.72	26.46	158	0.08
75	1.78	33.22	7.63	26.59	75	1.78	33.22	7.63	26.59	146	0.12
100	1.47	33.23	7.50	26.62	100	1.47	33.23	7.50	26.62	143	0.16
125	1.42	33.25	6.54	26.63	150	2.94	33.57	4.31	26.77	129	0.23
150	2.94	33.57	4.31	26.77	200	3.63	33.83	1.71	26.92	116	0.29
200	3.63	33.83	1.71	26.92	250	3.64	33.92	1.19	26.99	110	0.34
250	3.64	33.92	1.19	26.99	300	3.60	34.00	0.80	27.05	104	0.40
300	3.60	34.00	0.80	27.05	400	3.51	34.10	0.64	27.14	96	0.50
					500	3.41	34.18	0.57	27.21	90	0.59
392	3.52	34.09	0.65	27.13	600	3.23	34.24	0.57	27.28	84	0.68
492	3.42	34.18	0.57	27.21	700	3.06	34.28	0.58	27.33	80	0.76
690	3.08	34.28	0.58	27.33	800	2.92	34.33	0.60	27.38	76	0.84
1038	2.63	34.41	0.71	27.47	1000	2.67	34.40	0.68	27.46	69	0.98

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; June 6, 1959; 2345 GCT; 54°42'N, 171°00'E; wind, 200°, 14 kt; weather, overcast; sea, moderate.											25
0	5.3	32.93	-	26.02	0	5.3	32.93		26.02	199	0.00
9	5.10	32.96	7.73	26.07	10	5.05	32.97	7.73	26.08	194	0.02
18	4.71	33.01	7.71	26.15	20	4.66	33.01	7.67	26.16	187	0.04
28	4.48	33.03	7.56	26.19	30	4.47	33.03	7.53	26.20	183	0.06
46	4.08	33.06	7.36	26.26	50	3.78	33.07	7.37	26.30	174	0.09
69	2.68	33.14	7.32	26.45	75	2.43	33.16	7.32	26.49	156	0.13
92	2.04	33.22	7.12	26.57	100	2.05	33.23	6.98	26.57	147	0.17
116	2.24	33.30	6.36	26.62	150	3.19	33.59	3.80	26.77	130	0.24
140	2.94	33.49	4.58	26.71	200	3.76	33.86	1.56	26.93	115	0.30
188	3.78	33.84	1.72	26.91	250	3.70	33.93	1.02	26.99	110	0.36
236	3.72	33.91	1.14	26.97	300	3.65	34.01	0.75	27.06	104	0.41
310	3.64	34.03	0.73	27.07							
PIONEER; June 7, 1959; 0312, 0443 GCT; 55°00'N, 171°00'E; wind, 180°, 24 kt; weather, overcast; sea, rough.											26
0	5.0	33.01	-	26.12	0	5.0	33.01		26.12	190	0.00
10	4.98	33.00	7.60	26.12	10	4.98	33.00	7.60	26.12	191	0.02
20	4.42	33.04	7.58	26.21	20	4.42	33.04	7.58	26.21	182	0.04
30	4.24	33.05	7.47	26.24	30	4.24	33.05	7.47	26.24	180	0.06
50	3.30	33.09	7.39	26.36	50	3.30	33.09	7.39	26.36	168	0.09
75	2.56	33.16	6.62	26.48	75	2.56	33.16	6.62	26.48	156	0.13
100	1.69	33.21	6.59	26.58	100	1.69	33.21	6.59	26.58	146	0.17
125	1.36	33.22	6.53	26.61	150	1.88	33.34	6.20	26.67	138	0.24
150	1.88	33.34	6.20	26.67	200	3.61	33.77	2.06	26.87	120	0.31
199	3.60	33.77	2.08	26.87	250	3.75	33.93	1.04	26.98	110	0.36
249	3.75	33.93	1.05	26.98	300	3.64	33.99	0.77	27.04	105	0.42
299	3.64	33.99	0.76	27.04	400	3.64	34.12	0.95	27.14	96	0.52
					500	3.51	34.16	0.52	27.19	92	0.61
394	3.65	34.12	0.99	27.14	600	3.36	34.22	0.49	27.25	87	0.70
492	3.52	34.16	0.52	27.19	700	3.22	34.26	0.48	27.30	84	0.79
690	3.23	34.26	0.48	27.30	800	3.07	34.31	0.48	27.35	79	0.87
1036	2.72	34.39	0.54	27.45	1000	2.77	34.38	0.53	27.43	72	1.02
PIONEER; June 9, 1959; 0631, 0736 GCT; 55°00'N, 173°30'E; wind, 140°, 6 kt; weather, intermittent slight rain; sea, slight.											27
0	4.4	33.08	-	26.24	0	4.4	33.08		26.24	179	0.00
10	4.40	33.13	7.41	26.28	10	4.40	33.13	7.41	26.28	175	0.02
20	4.26	33.13	7.54	26.30	20	4.26	33.13	7.54	26.30	174	0.04
30	4.19	33.13	7.50	26.30	30	4.19	33.13	7.50	26.30	173	0.05
49	3.72	33.14	7.48	26.36	50	3.68	33.14	7.48	26.36	168	0.09
74	2.81	33.16	7.45	26.46	75	2.78	33.16	7.44	26.46	158	0.13
98	2.29	33.19	7.18	26.52	100	2.28	33.19	7.18	26.52	152	0.17
122	2.15	33.20	7.12	26.54	150	2.26	33.30	6.47	26.61	144	0.24
146	2.06	33.25	6.97	26.59	200	3.79	33.74	2.31	26.83	124	0.31
195	3.78	33.72	2.46	26.81	250	3.81	33.89	1.21	26.95	114	0.37
245	3.82	33.88	1.25	26.94	300	3.75	33.97	0.86	27.01	108	0.42
294	3.76	33.96	0.88	27.01	400	3.61	34.07	0.62	27.11	100	0.53
					500	3.47	34.14	0.57	27.18	94	0.62
374	3.66	34.05	0.63	27.09	600	3.36	34.19	0.53	27.23	89	0.72
471	3.50	34.12	0.59	27.16	700	3.24	34.24	0.49	27.28	85	0.80
667	3.28	34.22	0.50	27.26	800	3.10	34.28	0.48	27.32	81	0.88
1009	2.78	34.38	0.49	27.43	1000	2.80	34.38	0.49	27.43	72	1.04

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
28	PIONEER; June 12, 1959; 0253 GCT; 56°00'N, 175°00'E; wind, 180°, 8 kt; weather, cloudy; sea, moderate.										
0	4.5	33.11	-	26.26	0	4.5	33.11		26.26	177	0.00
9	4.31	33.13	7.43	26.29	10	4.30	33.13	7.43	26.29	174	0.02
18	4.24	33.13	7.43	26.30	20	4.24	33.13	7.44	26.30	173	0.04
28	4.20	33.13	7.47	26.30	30	4.19	33.13	7.47	26.30	173	0.05
47	3.92	33.13	7.45	26.33	50	3.75	33.14	7.46	26.36	168	0.09
82	2.39	33.22	7.54	26.54	75	2.63	33.21	7.54	26.51	153	0.13
145	1.87	33.23	7.18	26.59	100	2.09	33.19	7.72	26.54	151	0.16
238	3.83	33.87	1.51	26.93	150	2.03	33.28	6.73	26.62	144	0.24
311	3.74	33.98	0.88	27.02	200	3.31	33.68	3.17	26.83	124	0.30
					250	3.91	33.91	1.18	26.95	113	0.36
					300	3.85	33.99	0.76	27.02	107	0.42
29	PIONEER; June 12, 1959; 1700 GCT; 54°47'N, 177°43'E; wind, 260°, 4 kt; weather, cloudy; sea, smooth.										
0	4.7	33.13	-	26.25	0	4.7	33.13		26.25	178	0.00
10	4.70	33.14	7.54	26.26	10	4.70	33.14	7.54	26.26	177	0.02
20	4.32	33.16	7.39	26.31	20	4.32	33.16	7.39	26.31	172	0.04
30	4.32	33.14	7.36	26.30	30	4.32	33.14	7.36	26.30	174	0.05
49	4.24	33.14	7.34	26.31	50	4.15	33.15	7.34	26.32	171	0.09
73	2.70	33.23	7.31	26.52	75	2.70	33.23	7.29	26.52	152	0.13
98	2.54	33.25	7.10	26.55	100	2.50	33.25	7.10	26.55	149	0.16
123	2.14	33.26	7.00	26.59	150	2.23	33.31	6.47	26.62	143	0.24
147	2.06	33.28	6.81	26.61	200	3.91	33.72	2.49	26.80	127	0.30
197	3.91	33.71	2.58	26.79	250	3.86	33.89	1.34	26.94	114	0.36
246	3.86	33.88	1.41	26.93	300	3.79	33.98	0.82	27.02	107	0.42
320	3.76	34.00	0.78	27.04							
30	PIONEER; June 13, 1959; 0741, 0909 GCT; 53°30'N, 180°00'; wind, 260°, 14 kt; weather, cloudy; sea, slight.										
0	5.0	33.12	-	26.21	0	5.0	33.12		26.21	182	0.00
10	5.00	33.12	7.46	26.21	10	5.00	33.12	7.46	26.21	182	0.02
20	4.83	33.12	7.50	26.23	20	4.83	33.12	7.50	26.23	180	0.04
30	4.76	33.12	7.41	26.24	30	4.76	33.12	7.41	26.24	180	0.05
50	4.69	33.12	7.39	26.24	50	4.69	33.12	7.39	26.24	179	0.09
75	3.61	33.19	7.00	26.41	75	3.61	33.19	7.00	26.41	163	0.13
100	3.28	33.22	6.74	26.46	100	3.28	33.22	6.74	26.46	158	0.17
125	3.14	33.26	6.59	26.51	150	3.09	33.37	6.14	26.60	146	0.25
150	3.09	33.37	6.14	26.60	200	3.58	33.50	4.30	26.66	140	0.32
200	3.58	33.50	4.30	26.66	250	3.89	33.71	2.68	26.79	128	0.39
250	3.89	33.71	2.68	26.79	300	3.84	33.83	1.83	26.89	119	0.45
300	3.84	33.83	1.83	26.89							
371	3.78	33.92	1.42	26.97							
376	3.77	33.94	1.40	26.99							
381	3.74	33.96	1.34	27.01							
386	3.74	33.98	1.19	27.02							
390	3.72	33.99	1.14	27.03							
395	3.70	33.97	1.12	27.02							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; June 22, 1959; 0405, 0456 GCT; 52°38'N, 178°47'W; wind, 080°, 12 kt; weather, overcast; sea, slight.											31
0	5.6	33.11	-	26.13	0	5.6	33.11		26.13	189	0.00
10	5.29	33.11	7.24	26.17	10	5.29	33.11	7.24	26.17	186	0.02
20	5.20	33.11	7.24	26.18	20	5.20	33.11	7.24	26.18	185	0.04
30	4.76	33.13	7.09	26.24	30	4.76	33.13	7.09	26.24	179	0.06
49	4.34	33.20	6.65	26.34	50	4.32	33.20	6.64	26.35	169	0.09
74	4.04	33.24	6.22	26.41	75	4.04	33.24	6.19	26.41	164	0.13
98	4.02	33.29	5.71	26.45	100	4.02	33.30	5.70	26.46	159	0.17
122	3.96	33.36	5.51	26.51	150	3.81	33.38	5.15	26.54	151	0.25
146	3.80	33.37	5.22	26.53	200	3.83	33.49	4.45	26.63	144	0.32
195	3.85	33.49	4.47	26.62	250	3.84	33.60	3.65	26.71	136	0.40
244	3.80	33.57	3.88	26.69	300	4.00	33.77	2.30	26.83	125	0.46
294	4.03	33.76	2.33	26.82	400	3.69	33.95	1.62	27.00	109	0.58
					500	3.59	34.08	0.91	27.12	99	0.68
394	3.69	33.94	1.68	27.00	600	3.41	34.16	0.74	27.20	92	0.78
492	3.60	34.07	0.92	27.11	700	3.24	34.24	0.62	27.28	85	0.87
690	3.26	34.23	0.63	27.27	800	3.09	34.30	0.55	27.34	80	0.95
1038	2.78	34.38	0.56	27.43	1000	2.83	34.37	0.54	27.42	73	1.10
PIONEER; June 23, 1959; 0034 GCT; 52°46'N, 179°18'W; wind, 080°, 10 kt; weather, overcast; sea, slight.											32
0	5.6	33.07	-	26.10	0	5.6	33.07		26.10	192	0.00
10	5.18	33.07	7.24	26.15	10	5.18	33.07	7.24	26.15	188	0.02
20	4.36	33.14	6.80	26.29	20	4.36	33.14	6.80	26.29	174	0.04
30	4.08	33.19	6.54	26.36	30	4.08	33.19	6.54	26.36	167	0.05
49	3.94	33.21	6.32	26.39	50	3.93	33.21	6.31	26.39	165	0.09
74	3.84	33.27	6.05	26.45	75	3.84	33.27	6.03	26.45	159	0.13
98	3.82	33.32	5.57	26.49	100	3.82	33.33	5.51	26.50	155	0.17
123	3.82	33.39	5.02	26.55	150	3.88	33.44	4.82	26.58	148	0.24
147	3.88	33.44	4.84	26.58	200	3.85	33.50	4.38	26.63	143	0.32
197	3.86	33.49	4.41	26.62	250	3.80	33.60	3.84	26.72	136	0.39
246	3.80	33.59	3.88	26.71	300	3.79	33.64	3.52	26.75	133	0.45
321	3.80	33.65	3.44	26.76							
PIONEER; June 23, 1959; 0546, 0634 GCT; 52°59'N, 179°55'E; wind, 060°, 13 kt; weather, overcast; sea, slight.											33
0	5.6	33.00	-	26.04	0	5.6	33.00		26.04	197	0.00
10	5.58	32.99	7.29	26.04	10	5.58	32.99	7.29	26.04	198	0.02
20	5.37	33.00	7.29	26.07	20	5.37	33.00	7.29	26.07	195	0.04
30	5.43	33.02	7.29	26.08	30	5.43	33.02	7.29	26.08	194	0.06
50	5.02	33.04	7.30	26.14	50	5.02	33.04	7.30	26.14	188	0.10
75	-	33.10	6.78	-	75	3.80	33.10	6.78	26.32	171	0.14
100	3.36	33.19	6.73	26.43	100	3.36	33.19	6.73	26.43	161	0.18
125	3.26	33.26	6.13	26.50	150	2.70	33.26	6.80	26.55	150	0.26
150	2.70	33.26	6.80	26.55	200	3.70	33.46	4.37	26.61	145	0.34
200	3.70	33.46	4.37	26.61	250	4.08	33.72	2.70	26.78	129	0.40
250	4.08	33.72	2.70	26.78	300	3.99	33.87	1.65	26.91	118	0.47
300	3.99	33.87	1.65	26.91	400	3.83	34.01	0.91	27.04	106	0.58
					500	3.71	34.10	0.64	27.12	99	0.68
392	3.84	34.00	0.93	27.03	600	3.57	34.17	0.57	27.19	93	0.78
492	3.72	34.09	0.65	27.11	700	3.43	34.22	0.53	27.24	89	0.87
691	3.44	34.22	0.53	27.24	800	3.27	34.27	0.50	27.30	84	0.96
840	3.21	34.29	0.50	27.32							

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
34	PIONEER; June 24, 1959; 0306 GCT; 53°32'N, 179°58'W; wind, 060°, 10 kt; weather, overcast; sea, slight.											
	0	5.7	33.11	-	26.12	0	5.7	33.11		26.12	190	0.00
	10	5.51	33.12	7.31	26.15	10	5.51	33.12	7.31	26.15	187	0.02
	20	5.37	33.12	7.31	26.17	20	5.37	33.12	7.31	26.17	186	0.04
	30	5.20	33.12	7.31	26.19	30	5.20	33.12	7.31	26.19	184	0.06
	50	4.68	33.11	7.24	26.24	50	4.68	33.11	7.24	26.24	180	0.09
	75	3.62	33.19	6.83	26.41	75	3.62	33.19	6.83	26.41	163	0.14
	100	3.42	33.25	6.35	26.47	100	3.42	33.25	6.35	26.47	157	0.18
	125	3.22	33.28	6.32	26.52	150	2.93	33.29	6.47	26.55	150	0.25
	150	2.93	33.29	6.47	26.55	200	3.47	33.44	4.88	26.62	144	0.33
	200	3.47	33.44	4.88	26.62	250	3.87	33.66	3.15	26.76	132	0.40
	250	3.87	33.66	3.15	26.76	300	3.92	33.80	2.11	26.86	122	0.46
	325	3.82	33.84	1.85	26.90							
35	PIONEER; June 24, 1959; 0742 GCT; 54°00'N, 180°00'; wind, 040°, 12 kt; weather, overcast; sea, slight.											
	0	5.5	33.11	-	26.14	0	5.5	33.11		26.14	188	0.00
	10	5.52	33.10	7.30	26.13	10	5.52	33.10	7.30	26.13	189	0.02
	20	5.35	33.10	7.31	26.15	20	5.35	33.10	7.31	26.15	187	0.04
	30	5.22	33.11	7.31	26.18	30	5.22	33.11	7.31	26.18	185	0.06
	50	5.00	33.09	7.25	26.19	50	5.00	33.09	7.25	26.19	184	0.09
	75	3.36	33.19	6.69	26.43	75	3.36	33.19	6.69	26.43	161	0.14
	100	3.22	33.25	6.28	26.49	100	3.22	33.25	6.28	26.49	155	0.18
	124	3.24	33.29	6.07	26.52	150	3.36	33.37	5.44	26.58	148	0.25
	149	3.35	33.37	5.48	26.58	200	3.69	33.55	4.01	26.69	138	0.32
	173	3.52	33.46	4.76	26.63							
	198	3.68	33.54	4.09	26.68							
	222	3.83	33.69	2.97	26.78							
36	PIONEER; June 25, 1959; 0054 GCT; 54°26'N, 180°00'; wind, 040°, 5 kt; weather, overcast; sea, smooth.											
	0	5.7	33.09	-	26.10	0	5.7	33.09		26.10	192	0.00
	10	5.64	33.09	7.38	26.11	10	5.64	33.09	7.38	26.11	191	0.02
	20	5.30	33.09	7.40	26.15	20	5.30	33.09	7.40	26.15	188	0.04
	30	5.14	33.08	7.37	26.16	30	5.14	33.08	7.37	26.16	187	0.06
	50	5.02	33.09	7.29	26.18	50	5.02	33.09	7.29	26.18	185	0.09
	75	3.63	33.16	6.89	26.38	75	3.63	33.16	6.89	26.38	166	0.14
	100	3.29	33.21	6.64	26.45	100	3.29	33.21	6.64	26.45	159	0.18
	125	3.17	33.25	6.36	26.50	150	3.04	33.26	6.41	26.52	153	0.26
	150	3.04	33.26	6.41	26.52	200	3.10	33.30	6.27	26.54	151	0.33
	200	3.10	33.30	6.27	26.54	250	3.52	33.55	4.21	26.70	136	0.40
	276	3.89	33.76	2.37	26.83							
37	PIONEER; June 25, 1959; 0601, 0651 GCT; 55°00'N, 180°00'; wind, 020°, 6 kt; weather, overcast; sea, smooth.											
	0	5.6	33.09	-	26.12	0	5.6	33.09		26.12	191	0.00
	10	5.60	33.09	7.37	26.12	10	5.60	33.09	7.37	26.12	191	0.02
	20	5.32	33.08	7.38	26.14	20	5.32	33.08	7.38	26.14	188	0.04
	30	5.15	33.09	7.37	26.17	30	5.15	33.09	7.37	26.17	186	0.06
	50	4.26	33.11	7.18	26.28	50	4.26	33.11	7.18	26.28	175	0.09
	75	3.30	33.17	6.66	26.42	75	3.30	33.17	6.66	26.42	162	0.14
	100	3.28	33.26	6.25	26.50	100	3.28	33.26	6.25	26.50	155	0.18
	122	3.32	33.29	5.98	26.52	150	3.16	33.31	5.89	26.55	151	0.25
	150	3.16	33.31	5.89	26.55	200	3.54	33.50	4.26	26.66	140	0.32
	200	3.54	33.50	4.26	26.66	250	3.88	33.73	2.65	26.81	127	0.39
	250	3.88	33.73	2.65	26.81	300	3.79	33.86	1.66	26.92	116	0.45
	300	3.79	33.86	1.66	26.92	400	3.65	34.03	1.08	27.07	103	0.56
						500	3.55	34.10	0.69	27.14	97	0.66
	394	3.66	34.02	1.11	27.06	600	3.40	34.17	0.60	27.21	91	0.76
	493	3.56	34.10	0.71	27.14	700	3.26	34.22	0.54	27.26	87	0.84
	692	3.27	34.22	0.54	27.26	800	3.12	34.27	0.49	27.31	82	0.93
	1040	2.82	34.37	0.48	27.42	1000	2.87	34.36	0.47	27.41	74	1.09

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; June 26, 1959; 0140 GCT; 55°32'N, 179°59'W; wind, 290°, 10 kt; weather, overcast; sea, slight.											38
0	5.7	33.14	-	26.14	0	5.7	33.14		26.14	188	0.00
10	5.12	33.15	7.74	26.22	10	5.12	33.15	7.74	26.22	181	0.02
19	4.88	33.14	7.49	26.24	20	4.88	33.14	7.48	26.24	179	0.04
29	4.83	33.14	7.38	26.24	30	4.81	33.14	7.38	26.25	178	0.05
48	4.28	33.20	7.30	26.35	50	4.15	33.20	7.28	26.36	168	0.09
73	3.02	33.22	7.15	26.49	75	2.97	33.22	7.15	26.49	155	0.13
96	2.62	33.22	7.12	26.52	100	2.60	33.22	7.11	26.52	152	0.17
121	2.54	33.24	7.04	26.54	150	2.64	33.28	6.57	26.57	148	0.24
146	2.50	33.25	6.97	26.55	200	3.72	33.60	3.17	26.72	134	0.31
195	3.70	33.58	3.32	26.71	250	3.82	33.80	1.98	26.87	121	0.38
244	3.82	33.78	2.09	26.86	300	3.78	33.90	1.39	26.96	113	0.44
318	3.72	33.92	1.32	26.98							
PIONEER; June 26, 1959; 0636, 0727 GCT; 56°00'N, 180°00'; wind, 280°, 16 kt; weather, overcast; sea, moderate.											39
0	5.6	33.15	-	26.16	0	5.6	33.15		26.16	186	0.00
10	5.60	33.14	7.46	26.16	10	5.60	33.14	7.46	26.16	187	0.02
20	4.96	33.13	7.57	26.22	20	4.96	33.13	7.57	26.22	181	0.04
30	4.84	33.13	7.53	26.23	30	4.84	33.13	7.53	26.23	180	0.06
49	4.66	33.14	7.38	26.26	50	4.57	33.14	7.37	26.27	176	0.09
74	3.10	33.21	7.10	26.47	75	3.09	33.21	7.10	26.47	157	0.13
99	2.85	33.21	7.03	26.49	100	2.85	33.21	7.03	26.49	155	0.17
124	2.82	33.24	6.81	26.52	150	2.86	33.31	6.05	26.57	148	0.25
148	2.82	33.30	6.19	26.57	200	3.60	33.62	3.11	26.75	132	0.32
198	3.58	33.61	3.19	26.75	250	3.90	33.83	1.68	26.89	119	0.38
248	3.90	33.82	1.71	26.88	300	3.83	33.94	1.06	26.98	111	0.44
298	3.83	33.94	1.08	26.98	400	3.65	34.04	0.74	27.08	102	0.54
					500	3.50	34.11	0.63	27.15	96	0.64
394	3.66	34.03	0.75	27.07	600	3.38	34.17	0.53	27.21	91	0.74
492	3.51	34.11	0.64	27.15	700	3.25	34.23	0.46	27.27	86	0.83
688	3.27	34.22	0.47	27.26	800	3.12	34.27	0.44	27.31	82	0.91
1033	2.78	34.37	0.52	27.42	1000	2.83	34.36	0.49	27.41	74	1.07
PIONEER; June 27, 1959; 0223 GCT; 56°31'N, 179°50'E; wind, 280°, 11 kt; weather, intermittent slight drizzle; sea, moderate.											40
0	5.7	33.15	-	26.15	0	5.7	33.15		26.15	187	0.00
10	5.62	33.13	7.36	26.14	10	5.62	33.13	7.36	26.14	188	0.02
20	5.58	33.13	7.36	26.15	20	5.58	33.13	7.36	26.15	188	0.04
29	4.92	33.14	7.47	26.23	30	4.92	33.14	7.46	26.23	180	0.06
49	4.53	33.15	7.31	26.28	50	4.44	33.15	7.31	26.29	174	0.09
74	2.96	33.21	7.26	26.48	75	2.95	33.21	7.25	26.48	156	0.13
98	2.76	33.26	7.10	26.54	100	2.77	33.26	7.07	26.54	151	0.17
123	2.70	33.27	6.89	26.55	150	2.42	33.28	6.85	26.59	147	0.24
148	2.35	33.26	7.04	26.57	200	3.60	33.64	3.34	26.77	130	0.31
197	3.58	33.63	3.45	26.76	250	3.84	33.79	1.89	26.86	122	0.38
246	3.83	33.78	1.98	26.86	300	3.86	33.92	1.14	26.96	112	0.44
321	3.81	33.96	1.03	27.00							

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
41	PIONEER; June 27, 1959; 0706, 0754 GCT; 57°00'N, 180°00'; wind, 300°, 18 kt; weather, overcast; sea, moderate.											
	0	5.4	33.15	-	26.19	0	5.4	33.15		26.19	184	0.00
	10	5.32	33.15	7.54	26.20	10	5.32	33.15	7.54	26.20	183	0.02
	20	5.31	33.15	7.53	26.20	20	5.31	33.15	7.53	26.20	183	0.04
	30	4.70	33.18	7.40	26.29	30	4.70	33.18	7.40	26.29	174	0.05
	50	4.61	33.19	7.38	26.31	50	4.61	33.19	7.38	26.31	173	0.09
	75	2.86	33.23	7.31	26.51	75	2.86	33.23	7.31	26.51	154	0.13
	100	2.62	33.24	7.09	26.54	100	2.62	33.24	7.09	26.54	151	0.17
	125	2.34	33.25	7.09	26.57	150	2.27	33.25	7.10	26.57	148	0.24
	150	2.27	33.25	7.10	26.57	200	3.20	33.49	4.68	26.69	138	0.31
	200	3.20	33.49	4.68	26.69	250	3.93	33.77	2.13	26.84	124	0.38
	250	3.93	33.77	2.13	26.84	300	3.84	33.89	1.44	26.94	115	0.44
	300	3.84	33.89	1.44	26.94	400	3.69	34.05	0.75	27.08	102	0.55
						500	3.55	34.13	0.59	27.16	95	0.65
	394	3.70	34.04	0.76	27.08	600	3.37	34.19	0.54	27.23	90	0.74
	494	3.56	34.13	0.59	27.16	700	3.21	34.24	0.50	27.28	85	0.82
	692	3.22	34.24	0.50	27.28	800	3.06	34.29	0.48	27.34	80	0.91
	1038	2.75	34.40	0.50	27.45	1000	2.79	34.38	0.49	27.43	72	1.06
42	PIONEER; June 28, 1959; 0125 GCT; 57°28'N, 179°57'W; wind, 300°, 2 kt; weather, intermittent slight drizzle; sea, smooth.											
	0	5.8	32.91	-	25.95	0	5.8	32.91		25.95	206	0.00
	10	5.50	32.91	8.20	25.99	10	5.50	32.91	8.20	25.99	203	0.02
	20	4.88	32.96	7.77	26.10	20	4.88	32.96	7.77	26.10	193	0.04
	29	4.18	33.04	7.25	26.23	30	4.11	33.05	7.25	26.25	178	0.06
	49	3.06	33.17	7.22	26.44	50	3.04	33.17	7.24	26.45	160	0.09
	74	2.74	33.19	7.19	26.49	75	2.74	33.19	7.17	26.49	156	0.13
	98	2.66	33.23	6.80	26.53	100	2.63	33.23	6.81	26.53	152	0.17
	123	2.30	33.23	6.91	26.55	150	2.16	33.23	6.96	26.57	148	0.24
	148	2.08	33.22	7.10	26.56	200	3.59	33.50	4.03	26.66	141	0.32
	197	3.57	33.49	4.14	26.65	250	3.85	33.70	2.58	26.79	128	0.38
	246	3.84	33.69	2.67	26.78	300	3.84	33.83	1.88	26.89	119	0.45
	321	3.76	33.86	1.81	26.93							
43	PIONEER; June 28, 1959; 0621, 0711 GCT; 58°00'N, 180°00'; wind, 300°, 6 kt; weather, cloudy; sea, smooth.											
	0	5.6	32.87	-	25.94	0	5.6	32.87		25.94	207	0.00
	10	5.42	32.87	8.24	25.96	10	5.42	32.87	8.24	25.96	205	0.02
	20	4.72	32.94	7.85	26.10	20	4.72	32.94	7.85	26.10	192	0.04
	30	4.61	33.00	7.57	26.16	30	4.61	33.00	7.57	26.16	187	0.06
	50	3.22	33.06	7.27	26.34	50	3.22	33.06	7.27	26.34	169	0.10
	75	2.86	33.15	7.03	26.44	75	2.86	33.15	7.03	26.44	160	0.14
	100	2.72	33.21	6.76	26.50	100	2.72	33.21	6.76	26.50	154	0.18
	125	2.40	33.21	6.98	26.53	150	2.30	33.23	6.80	26.55	149	0.25
	150	2.30	33.23	6.80	26.55	200	1.94	33.24	6.89	26.59	146	0.33
	200	1.94	33.24	6.89	26.59	250	3.74	33.62	3.25	26.74	133	0.40
	250	3.74	33.62	3.25	26.74	300	3.78	33.77	2.25	26.85	123	0.46
	300	3.78	33.77	2.25	26.85	400	3.62	33.94	1.40	27.00	109	0.58
						500	3.51	34.07	0.91	27.12	99	0.68
	396	3.62	33.93	1.42	27.00	600	3.36	34.15	0.73	27.20	92	0.78
	494	3.52	34.06	0.92	27.11	700	3.21	34.23	0.59	27.27	86	0.86
	691	3.22	34.22	0.60	27.26	800	3.06	34.29	0.52	27.34	80	0.95
	1038	2.74	34.38	0.55	27.44	1000	2.79	34.37	0.53	27.42	73	1.10

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

44

PIONEER; June 29, 1959; 1220 GCT; 58°31'N, 180°00'; wind, 280°, 8 kt; weather, overcast; sea, smooth.

0	6.0	32.88	-	25.90	0	6.0	32.88		25.90	211	0.00
10	5.96	32.88	7.91	25.91	10	5.96	32.88	7.91	25.91	211	0.02
20	5.38	32.89	8.15	25.98	20	5.38	32.89	8.15	25.98	203	0.04
30	4.48	32.94	7.62	26.12	30	4.48	32.94	7.62	26.12	190	0.06
50	3.28	33.04	7.03	26.32	50	3.28	33.04	7.03	26.32	172	0.10
74	2.94	33.18	6.82	26.46	75	2.93	33.18	6.81	26.46	158	0.14
99	2.69	33.21	6.70	26.51	100	2.67	33.21	6.71	26.51	154	0.18
124	2.31	33.23	6.94	26.55	150	2.16	33.23	6.90	26.57	148	0.25
149	2.13	33.23	6.94	26.57	200	3.24	33.43	4.75	26.63	143	0.33
199	3.22	33.42	4.79	26.63	250	3.85	33.66	2.98	26.76	132	0.40
248	3.84	33.65	3.04	26.75	300	3.92	33.79	2.06	26.85	123	0.46
323	3.77	33.82	1.92	26.89							

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PIONEER; June 29, 1959; 1653, 1742 GCT; 59°00'N, 180°00'; wind, 280°, 10 kt; weather, intermittent slight drizzle; sea, smooth.

0	5.3	32.87	-	25.98	0	5.3	32.87		25.98	204	0.00
10	5.09	32.96	7.93	26.07	10	5.09	32.96	7.93	26.07	195	0.02
20	5.08	33.02	7.76	26.12	20	5.08	33.02	7.76	26.12	190	0.04
29	5.04	33.03	7.65	26.13	30	4.94	33.03	7.60	26.14	188	0.06
49	3.49	33.03	7.03	26.29	50	3.47	33.03	7.02	26.29	174	0.09
74	3.10	33.13	6.98	26.41	75	3.08	33.13	6.99	26.41	163	0.14
99	2.80	33.19	7.11	26.48	100	2.80	33.19	7.09	26.48	156	0.18
124	2.71	33.24	6.70	26.53	150	2.38	33.23	6.82	26.55	150	0.25
149	2.36	33.23	6.84	26.55	200	3.10	33.36	5.33	26.59	147	0.33
198	3.06	33.35	5.44	26.59	250	3.71	33.61	3.19	26.73	134	0.40
248	3.70	33.60	3.24	26.73	300	3.79	33.74	2.27	26.83	125	0.46
298	3.80	33.74	2.30	26.83	400	3.61	33.94	1.29	27.00	109	0.58
					500	3.50	34.06	0.87	27.11	100	0.68
386	3.62	33.92	1.37	26.99	600	3.35	34.14	0.71	27.19	93	0.78
482	3.53	34.04	0.91	27.09	700	3.20	34.22	0.59	27.27	86	0.87
675	3.24	34.20	0.62	27.25	800	3.06	34.27	0.53	27.32	82	0.95
1017	2.76	34.35	0.56	27.41	1000	2.78	34.35	0.55	27.41	74	1.11

46

PIONEER; June 29, 1959; 2214 GCT; 59°31'N, 180°00'; wind, 280°, 6 kt; weather, intermittent slight drizzle; sea, smooth.

0	6.0	32.86	-	25.89	0	6.0	32.86		25.89	212	0.00
10	5.90	32.86	7.84	25.90	10	5.90	32.86	7.84	25.90	211	0.02
20	5.10	32.88	7.84	26.01	20	5.10	32.88	7.84	26.01	201	0.04
30	4.24	32.90	7.19	26.12	30	4.24	32.90	7.19	26.12	191	0.06
50	2.90	33.04	7.15	26.35	50	2.90	33.04	7.15	26.35	168	0.10
75	3.00	33.15	6.66	26.43	75	3.00	33.15	6.66	26.43	161	0.14
100	2.54	33.17	6.82	26.49	100	2.54	33.17	6.82	26.49	156	0.18
125	2.45	33.22	6.71	26.53	150	2.33	33.22	6.69	26.54	150	0.26
150	2.33	33.22	6.69	26.54	200	3.57	33.15	3.96	26.67	140	0.33
200	3.57	33.51	3.96	26.67	250	3.84	33.69	2.68	26.78	129	0.40
250	3.84	33.69	2.68	26.78	300	3.84	33.81	1.96	26.88	121	0.46
325	3.74	33.84	1.81	26.91							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
47	PIONEER; June 30, 1959; 0250, 0437 GCT; 60°00'N, 180°00'; wind, 270°, 8 kt; weather, overcast; sea, smooth.										
0	6.5	32.86	-	25.82	0	6.5	32.86		25.82	218	0.00
10	6.10	32.86	7.83	25.87	10	6.10	32.86	7.83	25.87	214	0.02
20	5.30	32.92	7.81	26.02	20	5.30	32.92	7.81	26.02	200	0.04
30	4.59	32.95	7.25	26.12	30	4.59	32.95	7.25	26.12	190	0.06
49	3.12	33.13	6.76	26.41	50	3.12	33.13	6.76	26.41	163	0.10
74	3.00	33.21	6.82	26.48	75	2.99	33.21	6.82	26.48	156	0.14
99	2.78	33.22	6.81	26.51	100	2.78	33.22	6.80	26.51	154	0.18
123	2.68	33.26	6.69	26.55	150	2.30	33.23	6.92	26.55	149	0.25
148	2.24	33.22	7.03	26.55	200	3.44	33.47	4.46	26.65	141	0.33
198	3.41	33.46	4.56	26.64	250	3.83	33.70	2.70	26.79	128	0.39
247	3.83	33.69	2.74	26.78	300	3.80	33.79	2.07	26.87	122	0.46
296	3.81	33.78	2.11	26.86	400	3.61	33.96	1.32	27.02	108	0.57
					500	3.45	34.08	0.90	27.13	98	0.67
396	3.62	33.95	1.34	27.01	600	3.31	34.16	0.72	27.21	91	0.77
494	3.46	34.07	0.91	27.12	700	3.17	34.24	0.58	27.29	84	0.86
691	3.18	34.23	0.59	27.28	800	3.03	34.30	0.50	27.35	79	0.94
1037	2.72	34.38	0.52	27.44	1000	2.77	34.37	0.49	27.43	72	1.09
48	PIONEER; July 1, 1959; 0247 GCT; 60°30'N, 180°00'; wind, 240°, 8 kt; weather, fog in patches; sea, smooth.										
0	6.5	32.81	-	25.78	0	6.5	32.81		25.78	222	0.00
10	6.40	32.79	7.66	25.78	10	6.40	32.79	7.66	25.78	223	0.02
20	4.94	32.94	7.59	26.07	20	4.94	32.94	7.59	26.07	195	0.04
30	4.66	32.95	7.40	26.11	30	4.66	32.95	7.40	26.11	191	0.06
50	3.93	33.08	6.99	26.29	50	3.93	33.08	6.99	26.29	174	0.10
75	3.15	33.15	6.69	26.42	75	3.15	33.15	6.69	26.42	162	0.14
100	3.06	33.21	6.55	26.48	100	3.06	33.21	6.55	26.48	157	0.18
124	2.98	33.22	6.46	26.49	150	2.86	33.26	6.51	26.53	152	0.26
149	2.89	33.26	6.47	26.53	200	2.44	33.25	6.70	26.56	149	0.33
198	2.38	33.24	6.81	26.56	250	3.57	33.51	4.28	26.67	140	0.40
248	3.54	33.50	4.36	26.66	300	3.92	33.69	2.79	26.78	130	0.47
323	3.82	33.75	2.41	26.83							
49	PIONEER; July 1, 1959; 1602 GCT; 59°44'N, 177°30'E; wind, 240°, 18 kt; weather, fog; sea, rough.										
0	5.7	33.06	-	26.08	0	5.7	33.06		26.08	194	0.00
10	5.63	33.06	7.75	26.09	10	5.63	33.06	7.75	26.09	193	0.02
20	5.60	33.06	7.83	26.09	20	5.60	33.06	7.83	26.09	193	0.04
30	4.08	33.08	7.07	26.28	30	4.08	33.08	7.07	26.28	176	0.06
50	2.76	33.19	7.27	26.49	50	2.76	33.19	7.27	26.49	156	0.09
75	2.13	33.19	7.25	26.54	75	2.13	33.19	7.25	26.54	151	0.13
100	1.99	33.19	7.19	26.55	100	1.99	33.19	7.19	26.55	150	0.16
124	1.80	33.21	7.13	26.58	150	1.88	33.25	6.84	26.60	145	0.24
149	1.83	33.24	6.93	26.60	200	3.56	33.58	3.53	26.72	134	0.31
198	3.54	33.57	3.58	26.72	250	3.80	33.74	2.41	26.83	125	0.37
248	3.80	33.73	2.44	26.82	300	3.78	33.84	1.76	26.91	118	0.44
323	3.68	33.87	1.62	26.94							
50	PIONEER; July 2, 1959; 0607 GCT; 59°00'N, 175°00'E; wind, 270°, 24 kt; weather, fog in patches; sea, rough.										
0	5.6	33.15	-	26.16	0	5.6	33.15		26.16	186	0.00
10	5.51	33.14	7.60	26.17	10	5.51	33.14	7.60	26.17	186	0.02
20	5.47	33.13	7.53	26.16	20	5.47	33.13	7.53	26.16	186	0.04
28	5.44	33.13	7.45	26.17	30	5.07	33.14	7.45	26.22	181	0.06
47	2.74	33.21	7.45	26.50	50	2.64	33.21	7.44	26.51	153	0.09
71	2.08	33.21	7.37	26.56	75	2.01	33.21	7.38	26.56	148	0.13
95	1.74	33.22	7.38	26.59	100	1.73	33.22	7.35	26.59	146	0.16
118	1.66	33.22	7.27	26.59	150	1.69	33.24	6.91	26.61	144	0.24
142	1.50	33.22	7.24	26.61	200	2.98	33.51	4.24	26.72	134	0.31
188	2.60	33.40	5.12	26.67	250	3.92	33.82	1.80	26.88	120	0.37
236	3.76	33.75	2.30	26.84	300	3.82	33.91	1.25	26.96	113	0.43
308	3.71	33.91	1.34	26.97							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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PIONEER; July 4, 1959; 0505, 0607 GCT; 58°00'N, 175°00'E; wind, 240°, 15 kt; weather, fog; sea, moderate.

0	5.8	33.12	-	26.12	0	5.8	33.12		26.12	191	0.00
10	5.74	33.12	7.47	26.12	10	5.74	33.12	7.47	26.12	190	0.02
20	5.66	33.13	7.48	26.14	20	5.66	33.13	7.48	26.14	188	0.04
30	5.54	33.12	7.47	26.15	30	5.54	33.12	7.47	26.15	188	0.06
50	2.90	33.19	7.53	26.47	50	2.90	33.19	7.53	26.47	157	0.09
75	2.30	33.21	7.41	26.54	75	2.30	33.21	7.41	26.54	151	0.13
99	1.82	33.22	7.18	26.58	100	1.82	33.22	7.18	26.58	146	0.17
124	1.74	33.22	7.17	26.59	150	1.57	33.23	7.07	26.61	144	0.24
149	1.52	33.22	7.18	26.60	200	3.43	33.63	3.06	26.78	129	0.31
198	3.41	33.62	3.14	26.77	250	3.74	33.84	1.68	26.91	117	0.37
248	3.74	33.84	1.70	26.91	300	3.68	33.91	1.18	26.97	111	0.43
298	3.68	33.91	1.19	26.97	400	3.59	34.05	0.77	27.09	101	0.53
					500	3.43	34.14	0.62	27.18	93	0.63
392	3.60	34.04	0.78	27.09	600	3.30	34.20	0.54	27.24	88	0.72
492	3.44	34.13	0.63	27.17	700	3.17	34.25	0.49	27.29	84	0.81
691	3.18	34.25	0.49	27.29	800	3.04	34.30	0.46	27.35	79	0.89
1040	2.71	34.38	0.52	27.44	1000	2.76	34.37	0.49	27.43	72	1.04

52

PIONEER; July 5, 1959; 0741 GCT; 57°26'N, 174°59'E; wind, 260°, 20 kt; weather, overcast; sea, rough.

0	5.9	33.13	-	26.11	0	5.9	33.13		26.11	191	0.00
8	5.89	33.13	7.53	26.11	10	5.88	33.13	7.53	26.11	191	0.02
17	5.86	33.13	7.53	26.12	20	5.94	33.12	7.53	26.10	192	0.04
26	5.87	33.12	7.53	26.11	30	5.38	33.12	7.49	26.17	186	0.06
44	3.92	33.15	7.41	26.35	50	3.38	33.18	7.44	26.42	162	0.09
66	2.42	33.22	7.41	26.54	75	2.38	33.22	7.31	26.54	151	0.13
88	2.26	33.22	7.21	26.55	100	2.02	33.22	7.19	26.57	148	0.17
111	1.90	33.22	7.18	26.58	150	2.06	33.26	6.89	26.60	145	0.24
134	1.92	33.24	7.19	26.59	200	3.19	33.54	4.11	26.73	134	0.31
180	2.53	33.37	5.75	26.65	250	3.79	33.79	2.12	26.87	121	0.38
226	3.76	33.71	2.54	26.81	300	(3.72)	(33.86)	(1.53)	(26.93)	(116)	(0.43)
297	3.73	33.86	1.56	26.93							

53

PIONEER; July 5, 1959; 1942 GCT; 56°00'N, 175°00'E; wind, 260°, 20 kt; weather, overcast; sea, moderate.

0	6.7	33.13	-	26.01	0	6.7	33.13		26.01	201	0.00
10	6.69	33.13	7.20	26.01	10	6.69	33.13	7.20	26.01	201	0.02
19	6.64	33.13	7.19	26.02	20	6.45	33.13	7.22	26.04	198	0.04
29	5.04	33.15	7.41	26.23	30	4.99	33.15	7.36	26.23	180	0.06
48	4.04	33.17	6.84	26.35	50	3.88	33.18	6.91	26.37	166	0.09
72	2.59	33.24	7.34	26.54	75	2.51	33.24	7.31	26.55	150	0.13
97	2.04	33.23	7.12	26.57	100	1.99	33.23	7.11	26.58	147	0.17
121	1.82	33.24	6.84	26.60	150	2.29	33.40	5.40	26.69	136	0.24
144	1.96	33.32	6.08	26.65	200	3.79	33.81	1.90	26.88	119	0.31
192	3.80	33.80	2.04	26.87	250	3.73	33.90	1.23	26.96	112	0.36
240	3.74	33.88	1.34	26.94	300	3.72	33.98	0.80	27.03	107	0.42
313	3.72	34.00	0.72	27.04							

54

PIONEER; July 12, 1959; 0737 GCT; 52°18'N, 177°21'W; wind, 240°, 10 kt; weather, fog; sea, moderate.

0	6.9	33.07	25.94	0	6.9	33.07	25.94	208	0.00
10	6.40	33.06	25.99	10	6.40	33.06	25.99	202	0.02
20	5.49	33.08	26.12	20	5.49	33.08	26.12	190	0.04
30	5.03	33.13	26.21	30	5.03	33.13	26.21	182	0.06
50	4.28	33.15	26.31	50	4.28	33.15	26.31	172	0.10
75	4.50	33.27	26.38	75	4.50	33.27	26.38	166	0.14
100	4.38	33.31	26.43	100	4.38	33.31	26.43	162	0.18
125	4.36	33.34	26.45	150	4.34	33.38	26.49	157	0.26
150	4.34	33.38	26.49	200	4.18	33.45	26.56	150	0.34
200	4.18	33.45	26.56	250	3.66	33.47	26.63	144	0.41
250	3.66	33.47	26.63	300	3.64	33.60	26.73	134	0.48
325	3.81	33.71	26.80						

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
55	PIONEER; July 12, 1959; 2207 GCT; 53°11'N, 179°51'W; wind, 260°, 22 kt; weather, overcast; sea, very rough.										
0	7.3	33.10	-	25.90	0	7.3	33.10		25.90	211	0.00
10	7.10	33.09	7.06	25.92	10	7.10	33.09	7.06	25.92	209	0.02
20	6.52	33.10	7.16	26.01	20	6.52	33.10	7.16	26.01	201	0.04
30	6.24	33.10	7.19	26.05	30	6.24	33.10	7.19	26.05	198	0.06
50	4.68	33.13	6.72	26.25	50	4.68	33.13	6.72	26.25	178	0.10
75	3.96	33.24	3.90	26.41	75	3.96	33.24	3.90	26.41	163	0.14
99	3.28	33.24	6.50	26.48	100	3.26	33.24	6.51	26.48	156	0.18
123	2.87	33.24	6.76	26.52	150	2.74	33.24	6.75	26.53	152	0.26
148	2.74	33.24	6.78	26.53	200	2.98	33.40	5.45	26.63	142	0.33
248	3.82	33.73	2.62	26.82							
56	PIONEER; July 14, 1959; 0030 GCT; 53°59'N, 178°00'E; wind, 290°, 20 kt; weather, overcast; sea, very rough.										
0	7.4	33.01	-	25.82	0	7.4	33.01		25.82	219	0.00
10	7.20	32.99	7.02	25.83	10	7.20	32.99	7.02	25.83	218	0.02
19	7.11	33.00	7.07	25.85	20	6.88	33.01	7.11	25.89	212	0.04
28	5.42	33.08	7.35	26.13	30	5.36	33.10	7.29	26.15	188	0.06
48	4.78	33.19	6.83	26.29	50	4.71	33.19	6.76	26.30	174	0.10
73	4.00	33.19	6.28	26.37	75	3.94	33.19	6.32	26.38	166	0.14
97	3.54	33.24	6.28	26.46	100	3.54	33.25	6.16	26.46	158	0.18
121	3.53	33.30	5.53	26.50	150	3.49	33.35	5.21	26.55	151	0.26
145	3.53	33.35	5.22	26.54	200	3.54	33.53	4.04	26.69	138	0.33
194	3.44	33.48	4.40	26.66	250	4.06	33.82	1.87	26.86	122	0.40
243	4.02	33.79	2.08	26.84	300	3.97	33.94	1.19	26.97	112	0.46
317	3.80	33.94	1.30	26.99							
57	PIONEER; July 14, 1959; 2230, 2351 GCT; 55°00'N, 175°00'E; wind, 120°, 2 kt; weather, overcast; sea, slight.										
0	7.8	33.10	-	25.83	0	7.8	33.10		25.83	217	0.00
10	7.40	33.08	7.07	25.87	10	7.40	33.08	7.07	25.87	214	0.02
20	7.12	33.08	7.16	25.91	20	7.12	33.08	7.16	25.91	210	0.04
30	6.89	33.09	7.25	25.95	30	6.89	33.09	7.25	25.95	206	0.06
50	4.62	33.17	7.50	26.29	50	4.62	33.17	7.50	26.29	174	0.10
75	3.80	33.19	7.35	26.39	75	3.80	33.19	7.35	26.39	165	0.14
99	2.60	33.23	7.17	26.53	100	2.60	33.23	7.06	26.53	152	0.18
123	2.52	33.24	5.78	26.54	150	2.20	33.26	6.85	26.59	146	0.26
147	2.10	33.24	7.08	26.58	200	3.43	33.60	3.61	26.75	132	0.33
196	3.38	33.57	3.84	26.73	250	3.81	33.87	1.59	26.93	115	0.39
246	3.81	33.86	1.66	26.92	300	3.75	33.96	0.99	27.01	108	0.45
296	3.76	33.95	1.01	27.00	400	3.59	34.09	0.63	27.13	98	0.55
					500	3.46	34.18	0.55	27.21	90	0.64
392	3.60	34.08	0.64	27.12	600	3.33	34.22	0.52	27.25	87	0.73
488	3.48	34.17	0.55	27.20	700	3.20	34.27	0.49	27.31	82	0.82
686	3.22	34.26	0.49	27.30	800	3.07	34.31	0.47	27.35	79	0.90
1034	2.76	34.39	0.47	27.44	1000	2.81	34.38	0.47	27.43	72	1.05
58	PIONEER; July 16, 1959; 0159 GCT; 54°28'N, 175°00'E; wind, 140°, 2 kt; weather, overcast; sea, smooth.										
0	8.4	32.94	-	25.62	0	8.4	32.94		25.62	238	0.00
10	7.64	32.92	7.06	25.72	10	7.64	32.92	7.06	25.72	229	0.02
20	7.22	32.92	7.12	25.77	20	7.22	32.92	7.12	25.77	223	0.05
30	5.35	33.03	7.54	26.10	30	5.35	33.03	7.54	26.10	193	0.07
49	4.14	33.06	7.01	26.25	50	4.10	33.07	6.99	26.27	177	0.10
74	3.38	33.20	6.63	26.44	75	3.36	33.20	6.64	26.44	160	0.15
98	3.03	33.23	6.63	26.49	100	3.01	33.23	6.60	26.50	155	0.18
123	2.87	33.30	6.07	26.56	150	3.06	33.44	4.91	26.66	140	0.26
147	2.97	33.41	5.15	26.64	200	3.96	33.79	2.04	26.85	122	0.32
196	3.96	33.78	2.12	26.84	250	3.94	33.92	1.30	26.96	113	0.38
246	3.94	33.91	1.34	26.95	300	3.84	33.99	0.90	27.02	107	0.44
319	3.78	34.01	0.84	27.04							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; July 16, 1959; 0637, 0741 GCT; 54°00'N, 175°00'E; wind, 150°, 5 kt; weather, overcast; sea, slight.											59
0	8.2	32.94	-	25.65	0	8.2	32.94		25.65	235	0.00
10	7.88	32.92	6.92	25.68	10	7.88	32.92	6.92	25.68	232	0.02
20	7.41	32.92	6.92	25.75	20	7.41	32.92	6.92	25.75	226	0.05
30	5.50	32.99	6.65	26.05	30	5.50	32.99	6.65	26.05	197	0.07
50	4.32	33.09	7.17	26.26	50	4.32	33.09	7.17	26.26	177	0.10
75	3.40	33.22	6.31	26.45	75	3.40	33.22	6.31	26.45	159	0.15
99	2.69	33.22	6.81	26.51	100	2.66	33.22	6.83	26.52	153	0.18
124	2.40	33.28	6.68	26.59	150	2.91	33.44	5.08	26.67	139	0.26
149	2.88	33.43	5.17	26.67	200	4.00	33.79	2.03	26.85	123	0.32
198	4.00	33.78	2.07	26.84	250	3.92	33.92	1.20	26.96	113	0.38
248	3.92	33.92	1.21	26.96	300	3.86	33.99	0.93	27.02	107	0.44
298	3.86	33.99	0.94	27.02	400	3.66	34.10	0.62	27.13	98	0.54
					500	3.53	34.15	0.50	27.18	94	0.64
392	3.67	34.10	0.64	27.13	600	3.41	34.21	0.60	27.24	88	0.73
491	3.54	34.15	0.49	27.18	700	3.29	34.25	0.66	27.28	85	0.81
690	3.30	34.25	0.66	27.28	800	3.15	34.30	0.68	27.33	80	0.90
1038	2.78	34.39	0.56	27.44	1000	2.84	34.38	0.59	27.43	72	1.05
PIONEER; July 17, 1959; 0130 GCT; 53°31'N, 175°00'E; wind, 230°, 20 kt; weather, overcast; sea, moderate.											60
0	7.8	32.98	-	25.74	0	7.8	32.98		25.74	226	0.00
9	7.72	32.98	6.93	25.75	10	7.67	32.98	6.94	25.76	225	0.02
18	7.37	33.00	7.02	25.82	20	7.37	32.99	7.02	25.81	220	0.04
28	7.14	32.99	7.07	25.84	30	6.90	33.00	7.15	25.88	213	0.07
47	5.23	33.08	7.50	26.15	50	5.03	33.08	7.45	26.17	186	0.11
70	3.94	33.10	7.12	26.31	75	3.75	33.12	7.04	26.34	170	0.15
94	3.19	33.18	6.82	26.44	100	3.11	33.19	6.81	26.45	159	0.19
117	2.91	33.23	6.68	26.50	150	2.66	33.29	6.15	26.57	148	0.27
141	2.68	33.27	6.19	26.56	200	3.15	33.52	4.41	26.71	135	0.34
189	2.88	33.43	5.22	26.67	250	3.91	33.82	1.88	26.88	120	0.40
237	3.78	33.76	2.36	26.85	300	3.93	33.94	1.19	26.97	112	0.46
310	3.84	33.94	1.27	26.98							
PIONEER; July 19, 1959; 0555, 0659 GCT; 51°54'N, 174°06'E; wind, 240°, 10 kt; weather, cloudy; sea, slight.											61
0	8.5	32.87	-	25.55	0	8.5	32.87		25.55	244	0.00
10	8.02	32.84	7.06	25.60	10	8.02	32.84	7.06	25.60	240	0.02
20	7.94	32.84	7.03	25.61	20	7.94	32.84	7.03	25.61	239	0.05
30	6.53	32.89	7.40	25.84	30	6.53	32.89	7.40	25.84	217	0.07
50	4.76	32.96	6.76	26.11	50	4.76	32.96	6.76	26.11	192	0.11
74	4.00	33.10	6.40	26.30	75	4.00	33.10	6.37	26.30	174	0.16
99	3.98	33.20	5.87	26.38	100	3.98	33.20	5.86	26.38	166	0.20
123	4.02	33.26	5.64	26.42	150	3.94	33.31	5.26	26.47	158	0.28
148	3.94	33.30	5.30	26.46	200	3.98	33.47	4.35	26.59	147	0.36
198	3.98	33.46	4.38	26.59	250	3.96	33.63	3.35	26.72	135	0.43
247	3.96	33.62	3.43	26.72	300	4.00	33.80	2.23	26.85	123	0.49
296	4.00	33.79	2.31	26.85	400	3.86	34.00	0.90	27.03	107	0.61
					500	3.66	34.10	0.60	27.13	99	0.71
398	3.86	34.00	0.91	27.03	600	3.55	34.17	0.57	27.19	93	0.80
486	3.68	34.09	0.60	27.12	700	3.43	34.23	0.55	27.25	88	0.90
682	3.45	34.22	0.55	27.24	800	3.30	34.28	0.54	27.31	84	0.98
1030	2.98	34.38	0.56	27.41	1000	3.02	34.37	0.55	27.40	75	1.14

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
62	PIONEER; July 22, 1959; 0244, 0441 GCT; 51°30'N, 175°00'E; wind, 130°, 15 kt; weather, fog; sea, moderate.											
	0	7.9	32.83	-	25.61	0	7.9	32.83		25.61	239	0.00
	10	7.44	32.81	6.91	25.66	10	7.44	32.81	6.91	25.66	234	0.02
	20	6.66	32.87	6.97	25.81	20	6.66	32.87	6.97	25.81	220	0.05
	30	5.28	33.03	6.29	26.11	30	5.28	33.03	6.29	26.11	192	0.07
	50	4.75	33.15	5.88	26.26	50	4.75	33.15	5.88	26.26	177	0.10
	75	4.41	33.24	5.73	26.37	75	4.41	33.24	5.73	26.37	167	0.15
	100	4.38	33.30	5.20	26.42	100	4.38	33.30	5.20	26.42	163	0.19
	125	4.38	33.30	5.05	26.42	150	4.32	33.36	4.74	26.47	158	0.27
	150	4.32	33.36	4.74	26.47	200	4.22	33.42	4.41	26.53	153	0.35
	200	4.22	33.42	4.41	26.53	250	4.18	33.47	4.18	26.57	149	0.42
	250	4.18	33.47	4.18	26.57	300	4.04	33.65	3.33	26.73	135	0.49
	300	4.04	33.65	3.33	26.73	400	3.86	33.91	1.77	26.96	114	0.62
						500	3.66	34.00	1.41	27.05	106	0.73
	400	3.86	33.91	1.77	26.96	600	3.60	34.10	1.10	27.13	99	0.83
	500	3.66	34.00	1.41	27.05	700	3.52	34.18	0.86	27.20	93	0.92
	700	3.52	34.18	0.86	27.20	800	3.42	34.25	0.71	27.27	87	1.02
	1050	3.06	34.34	0.65	27.38	1000	3.14	34.33	0.63	27.36	79	1.18
63	PIONEER; July 23, 1959; 0301 GCT; 51°00'N, 175°00'E; wind, 200°, 10 kt; weather, light fog; sea, slight.											
	0	9.5	32.68	-	25.25	0	9.5	32.68		25.25	273	0.00
	10	8.38	32.67	6.99	25.41	10	8.38	32.67	6.99	25.41	258	0.03
	20	8.02	32.68	7.01	25.47	20	8.02	32.68	7.01	25.47	252	0.05
	30	6.24	32.81	7.20	25.82	30	6.24	32.81	7.20	25.82	219	0.08
	50	4.58	32.89	6.72	26.07	50	4.58	32.89	6.72	26.07	195	0.12
	75	3.97	33.02	6.41	26.24	75	3.97	33.02	6.41	26.24	180	0.16
	100	4.16	33.21	5.58	26.37	100	4.16	33.21	5.58	26.37	167	0.21
	125	4.00	33.50	-	26.62	150	3.98	33.68	2.89	26.76	130	0.28
	150	3.98	33.68	2.89	26.76	200	3.94	33.90	1.56	26.94	114	0.34
	200	3.94	33.90	1.56	26.94	250	3.88	33.97	1.04	27.00	109	0.40
	250	3.88	33.97	1.04	27.00	300	3.81	34.02	0.73	27.05	104	0.45
	325	3.78	34.04	0.64	27.07							
64	PIONEER; July 23, 1959; 0603, 0906 GCT; 50°30'N, 175°00'E; wind, 200°, 7 kt; weather, light fog; sea, slight.											
	0	9.4	32.81	-	25.36	0	9.4	32.81		25.36	262	0.00
	10	8.61	32.80	7.01	25.48	10	8.61	32.80	7.01	25.48	251	0.03
	20	8.14	32.79	7.07	25.54	20	8.14	32.79	7.07	25.54	246	0.05
	30	5.68	32.94	7.28	25.99	30	5.68	32.94	7.28	25.99	203	0.07
	50	4.39	33.09	6.15	26.25	50	4.39	33.09	6.15	26.25	178	0.11
	75	4.28	33.28	5.42	26.41	75	4.28	33.28	5.42	26.41	163	0.15
	100	4.22	33.37	3.65	26.49	100	4.22	33.37	3.65	26.49	156	0.19
	125	4.10	33.48	4.77	26.59	150	3.94	33.59	4.21	26.69	137	0.27
	150	3.94	33.59	4.21	26.69	200	3.94	33.79	2.25	26.85	122	0.33
	200	3.94	33.79	2.25	26.85	250	3.79	33.90	1.29	26.96	113	0.39
	250	3.79	33.90	1.29	26.96	300	3.82	34.01	0.93	27.04	105	0.45
	300	3.82	34.01	0.93	27.04	400	3.57	34.13	0.68	27.16	95	0.55
						500	3.41	34.19	0.72	27.22	89	0.64
	391	3.59	34.13	0.67	27.16	600	3.28	34.27	0.56	27.30	83	0.72
	488	3.42	34.18	0.74	27.21	700	3.15	34.34	0.47	27.37	77	0.80
	685	3.17	34.33	0.48	27.36	800	3.00	34.39	0.44	27.42	72	0.88
	1033	2.62	34.44	0.60	27.49	1000	2.68	34.44	0.56	27.49	66	1.02

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

PIONEER; July 24, 1959; 0710 GCT; 50°38'N, 177°10'E; wind, 160°, 7 kt; weather, cloudy; sea, slight. 65

0	9.7	32.84	-	25.34	0	9.7	32.84		25.34	264	0.00
10	8.17	32.29	7.13	25.15	10	8.17	32.29	7.13	25.15	283	0.03
20	7.52	32.79	7.15	25.63	20	7.52	32.79	7.15	25.63	237	0.05
30	7.45	32.89	7.34	25.72	30	7.45	32.89	7.34	25.72	229	0.08
50	4.80	32.98	6.99	26.12	50	4.80	32.98	6.99	26.12	191	0.12
74	3.99	33.02	6.83	26.24	75	3.96	33.02	6.83	26.24	179	0.16
98	3.54	33.15	6.35	26.38	100	3.51	33.17	6.22	26.40	164	0.21
123	3.44	33.44	4.52	26.62	150	3.81	33.77	2.24	26.85	122	0.28
147	3.82	33.75	2.33	26.83	200	3.64	34.01	1.11	27.06	103	0.34
197	3.65	34.00	1.16	27.05	250	3.56	34.13	0.52	27.16	93	0.38
321	3.60	34.10	0.58	27.13	300	3.57	34.14	0.45	27.17	93	0.43

PIONEER; July 24, 1959; 2031 GCT; 50°53'N, 179°55'E; wind, 220°, 5 kt; weather, cloudy; sea, smooth. 66

0	9.4	32.63	-	25.22	0	9.4	32.63		25.22	276	0.00
10	8.18	32.64	7.01	25.42	10	8.18	32.64	7.01	25.42	257	0.03
20	7.77	32.65	7.01	25.49	20	7.77	32.65	7.01	25.49	251	0.05
30	7.29	32.68	6.96	25.58	30	7.29	32.68	6.96	25.58	242	0.08
50	6.04	32.75	6.94	25.79	50	6.04	32.75	6.94	25.79	222	0.12
75	4.28	32.88	6.96	26.10	75	4.28	32.88	6.96	26.10	193	0.18
99	3.72	32.96	6.50	26.22	100	3.73	32.97	6.44	26.22	181	0.22
123	4.00	33.30	4.87	26.46	150	4.22	33.69	2.67	26.74	132	0.30
148	4.23	33.68	2.76	26.74	200	3.97	33.93	1.04	26.96	112	0.36
197	3.98	33.92	1.08	26.95	250	3.86	34.01	0.68	27.04	105	0.42
246	3.87	34.00	0.71	27.03	300	3.76	34.07	0.56	27.09	100	0.47
321	3.72	34.09	0.57	27.11							

PIONEER; July 25, 1959; 0437 GCT; 51°11'N, 178°12'W; wind, 220°, 12 kt; weather, fog; sea, slight. 67

0	7.7	32.74	-	25.57	0	7.7	32.74		25.57	243	0.00
10	6.57	32.72	7.20	25.70	10	6.57	32.72	7.20	25.70	230	0.02
20	5.88	32.93	6.80	25.96	20	5.88	32.93	6.80	25.96	206	0.05
29	5.82	32.98	6.78	26.00	30	5.77	32.99	6.74	26.02	200	0.07
48	5.16	33.20	6.19	26.25	50	5.16	33.21	6.14	26.26	177	0.10
73	4.92	33.32	5.49	26.38	75	4.80	33.32	5.45	26.39	165	0.15
97	4.08	33.37	4.87	26.51	100	4.14	33.39	4.73	26.52	154	0.19
121	4.52	33.55	3.75	26.60	150	4.75	33.77	2.56	26.75	132	0.26
145	4.82	33.75	2.70	26.73	200	4.26	33.89	1.58	26.90	118	0.32
194	4.30	33.88	1.64	26.89	250	4.03	33.96	1.16	26.98	111	0.38
243	4.06	33.95	1.22	26.97	300	3.92	34.01	0.77	27.03	106	0.43
317	3.90	34.03	0.64	27.05							

PIONEER; July 27, 1959; 0546 GCT; 51°31'N, 176°42'W; wind, 080°, 10 kt; weather, partly cloudy; sea, calm. 68

0	7.9	33.07	-	25.80	0	7.9	33.07		25.80	221	0.00
10	6.46	33.15	7.86	26.06	10	6.46	33.15	7.86	26.06	196	0.02
20	5.80	33.21	7.53	26.19	20	5.80	33.21	7.53	26.19	184	0.04
30	5.10	33.21	6.18	26.27	30	5.10	33.21	6.18	26.27	176	0.06
50	4.70	33.31	5.39	26.39	50	4.70	33.31	5.39	26.39	165	0.09
75	4.64	33.35	5.17	26.43	75	4.64	33.35	5.17	26.43	161	0.13
100	4.52	33.40	4.91	26.48	100	4.52	33.40	4.91	26.48	157	0.17
125	4.44	33.45	4.65	26.53	150	4.33	33.49	4.42	26.57	148	0.25
150	4.33	33.49	4.42	26.57	200	4.25	33.54	4.05	26.62	144	0.32
199	4.25	33.54	4.05	26.62	250	4.23	33.58	3.93	26.66	141	0.39
248	4.23	33.58	3.93	26.66	300	(4.26)	(33.63)	(3.53)	(26.69)	(138)	(0.46)
297	4.26	33.63	3.57	26.69							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
69	PIONEER; July 28, 1959; 0615 GCT; 51°31'N, 176°40'W; wind, missing; weather, missing; sea, missing.										
0	7.2	33.16	-	25.97	0	7.2	33.16		25.97	205	0.00
10	5.48	33.19	5.94	26.21	10	5.48	33.19	5.94	26.21	182	0.02
20	5.33	33.21	6.24	26.24	20	5.33	33.21	6.24	26.24	179	0.04
30	5.24	33.22	5.99	26.26	30	5.24	33.22	5.99	26.26	177	0.06
50	4.82	33.26	5.12	26.34	50	4.82	33.26	5.12	26.34	170	0.09
75	4.71	33.34	5.39	26.42	75	4.71	33.34	5.39	26.42	163	0.13
100	4.70	33.36	5.29	26.43	100	4.70	33.36	5.29	26.43	162	0.17
124	4.56	33.39	5.21	26.47	150	4.45	33.38	4.98	26.47	158	0.25
148	4.45	33.38	-	26.47	200	4.38	33.44	4.65	26.53	153	0.33
198	4.38	-	4.66	-	250	4.32	33.50	4.41	26.58	148	0.41
248	4.32	33.50	4.42	26.58	300	4.26	33.56	4.11	26.64	144	0.48
323	4.24	33.58	3.95	26.66							
70	PIONEER; July 29, 1959; 0425 GCT; 51°33'N, 176°39'W; wind, missing; weather, missing; sea, missing.										
0	8.7	33.09	-	25.69	0	8.7	33.09		25.69	231	0.00
10	6.45	33.13	7.49	26.04	10	6.45	33.13	7.49	26.04	198	0.02
20	6.11	33.18	-	26.12	20	6.11	33.18	7.29	26.12	190	0.04
30	5.89	-	7.09	-	30	5.89	33.22	7.09	26.18	184	0.06
50	5.23	33.24	5.77	26.28	50	5.23	33.24	5.77	26.28	176	0.10
75	4.91	33.26	5.15	26.33	75	4.91	33.26	5.15	26.33	171	0.14
99	4.63	33.34	5.02	26.42	100	4.63	33.34	5.03	26.42	162	0.18
123	4.54	33.39	5.10	26.47	150	4.38	33.49	4.47	26.57	149	0.26
148	4.40	33.48	4.55	26.56	200	4.24	33.59	3.71	26.66	140	0.33
172	4.26	33.56	3.89	26.64							
196	4.24	33.59	3.74	26.66							
221	4.25	33.61	3.53	26.68							
71	PIONEER; July 29, 1959; 0612 GCT; 51°29'N, 176°38'W; wind, missing; weather, missing; sea, missing.										
0	10.0	33.06	-	25.46	0	10.0	33.06		25.46	253	0.00
10	6.74	-	7.94	-	10	6.74	33.20	7.94	26.06	196	0.02
20	5.81	-	7.03	-	20	5.81	33.25	7.03	26.22	181	0.04
30	5.54	33.26	6.69	26.26	30	5.54	33.26	6.69	26.26	178	0.06
50	5.10	33.27	6.01	26.32	50	5.10	33.27	6.01	26.32	172	0.09
75	4.93	33.29	5.68	26.35	75	4.93	33.29	5.68	26.35	169	0.14
99	4.82	33.33	5.56	26.40	100	4.82	33.33	5.54	26.40	165	0.18
124	4.72	33.38	5.33	26.45	150	4.56	33.43	5.07	26.50	155	0.26
148	4.57	33.43	5.07	26.50	200	4.45	33.54	4.78	26.60	146	0.33
198	4.45	33.52	4.79	26.59	250	4.35	33.91	4.11	26.91	118	0.40
248	4.36	33.90	4.16	26.90	300	4.17	34.13	2.69	27.10	100	0.45
323	4.06	34.17	1.77	27.14							
72	PIONEER; August 5, 1959; 0007 GCT; 51°30'N, 175°00'W; wind, 320°, 5 kt; weather, overcast; sea, smooth.										
0	10.0	32.47	-	25.00	0	10.0	32.47		25.00	297	0.00
10	10.04	32.45	6.85	24.98	10	10.04	32.45	6.85	24.98	299	0.03
20	9.70	32.46	7.12	25.04	20	9.70	32.46	7.12	25.04	293	0.06
30	8.04	32.45	6.98	25.29	30	8.04	32.45	6.98	25.29	270	0.09
50	6.32	32.74	6.73	25.75	50	6.32	32.74	6.73	25.75	226	0.14
75	4.08	32.94	6.66	26.16	75	4.08	32.94	6.66	26.16	186	0.19
100	3.61	33.09	6.00	26.33	100	3.61	33.09	6.00	26.33	171	0.24
124	3.96	33.53	3.56	26.64	150	4.14	33.77	2.24	26.82	125	0.31
148	4.15	33.76	2.28	26.81	200	3.91	33.92	1.24	26.96	112	0.37
197	3.92	33.92	1.29	26.96	250	3.76	33.96	0.68	27.01	108	0.42
246	3.77	33.96	-	27.00	300	3.68	34.03	0.57	27.07	102	0.48
320	3.67	34.06	0.65	27.09							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m
PIONEER; August 5, 1959; 0512, 0602 GCT; 51°00'N, 175°00'W; wind, 320°, 15 kt; weather, overcast; sea, moderate.											73
0	10.4	32.71	-	25.12	0	10.4	32.71		25.12	285	0.00
10	10.02	32.68	6.72	25.16	10	10.02	32.68	6.72	25.16	282	0.03
20	8.68	32.65	6.90	25.35	20	8.68	32.65	6.90	25.35	264	0.06
30	7.32	32.71	6.91	25.60	30	7.32	32.71	6.91	25.60	240	0.08
50	4.64	32.84	6.85	26.03	50	4.64	32.84	6.85	26.03	200	0.12
75	3.80	32.97	6.79	26.22	75	3.80	32.97	6.79	26.22	182	0.17
100	3.52	33.19	5.38	26.42	100	3.52	33.19	5.38	26.42	163	0.22
125	4.04	33.58	3.21	26.68	150	3.91	33.81	1.66	26.87	120	0.29
150	3.91	33.81	1.66	26.87	200	3.86	33.95	0.75	26.99	110	0.34
200	3.86	33.95	0.75	26.99	250	3.84	34.02	0.55	27.05	104	0.40
250	3.84	34.02	0.55	27.05	300	3.79	34.06	0.47	27.08	101	0.45
300	3.79	34.06	0.47	27.08	400	3.59	34.17	0.44	27.19	92	0.54
					500	3.44	34.23	0.50	27.25	87	0.63
389	3.60	34.16	0.43	27.18	600	3.28	34.29	0.56	27.31	81	0.72
489	3.46	34.22	0.49	27.24	700	3.12	34.34	0.60	27.37	76	0.80
688	3.14	34.33	0.60	27.36	800	2.96	34.37	0.64	27.41	73	0.87
1038	2.60	34.43	0.65	27.49	1000	2.66	34.42	0.65	27.47	68	1.01
PIONEER; August 6, 1959; 0151 GCT; 50°31'N, 175°00'W; wind, 210°, 4 kt; weather, overcast; sea, smooth.											74
0	10.7	32.70	-	25.06	0	10.7	32.70		25.06	291	0.00
8	10.13	32.67	6.63	25.13	10	9.47	32.66	6.74	25.24	274	0.03
16	8.03	32.68	6.97	25.47	20	7.79	32.75	7.01	25.56	244	0.05
25	7.36	32.83	7.03	25.68	30	6.52	32.87	7.00	25.83	218	0.08
40	5.23	32.93	6.96	26.03	50	4.78	32.94	6.98	26.09	193	0.12
65	4.19	32.97	6.97	26.18	75	3.78	33.00	7.17	26.24	179	0.16
88	3.50	33.07	6.81	26.32	100	3.54	33.16	5.50	26.39	165	0.21
109	3.62	33.24	4.74	26.45	150	3.99	33.65	2.55	26.74	133	0.28
133	4.04	33.48	3.62	26.60	200	3.89	33.92	1.00	26.96	112	0.34
180	3.92	33.87	1.27	26.92	250	3.86	34.02	0.64	27.04	105	0.40
226	3.86	33.98	0.74	27.01	300	(3.75)	(34.05)	(0.56)	(27.08)	(102)	(0.45)
297	3.76	34.05	0.56	27.08							
PIONEER; August 6, 1959; 0652, 0748 GCT; 50°00'N, 175°00'W; wind, 210°, 4 kt; weather, fog, depositing rime; sea, smooth.											75
0	10.4	32.78	-	25.17	0	10.4	32.78		25.17	280	0.00
10	10.18	32.77	6.97	25.20	10	10.18	32.77	6.97	25.20	278	0.03
20	8.30	32.83	6.57	25.55	20	8.30	32.83	6.57	25.55	245	0.05
30	6.92	32.86	7.01	25.77	30	6.92	32.86	7.01	25.77	224	0.08
50	4.98	32.95	6.96	26.08	50	4.98	32.95	6.96	26.08	195	0.12
75	3.88	33.00	6.92	26.23	75	3.88	33.00	6.92	26.23	180	0.17
100	3.54	33.08	6.65	26.33	100	3.54	33.08	6.65	26.33	171	0.21
125	3.30	33.23	5.78	26.47	150	3.32	33.50	4.18	26.68	138	0.29
150	3.32	33.50	4.18	26.68	200	3.08	33.71	2.95	26.87	120	0.35
200	3.08	33.71	2.95	26.87	250	3.35	33.85	1.77	26.96	112	0.41
250	3.35	33.85	1.77	26.96	300	3.45	33.96	1.09	27.04	105	0.46
300	3.45	33.96	1.09	27.04	400	3.61	34.13	0.62	27.16	95	0.56
					500	3.48	34.22	0.41	27.24	88	0.65
394	3.62	34.12	0.63	27.15	600	3.31	34.28	0.37	27.30	82	0.74
490	3.50	34.21	0.43	27.23	700	3.14	34.33	0.37	27.36	77	0.82
688	3.16	34.32	0.37	27.35	800	2.97	34.37	0.41	27.41	73	0.89
1035	2.58	34.42	0.71	27.48	1000	2.64	34.42	0.65	27.48	67	1.04

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
76	PIONEER; August 7, 1959; 0318 GCT; 49°27'N, 175°02'W; wind, 170°, 10 kt; weather, cloudy; sea, smooth.											
	0	10.5	32.75	-	25.13	0	10.5	32.75		25.13	284	0.00
	10	10.10	32.75	6.96	25.20	10	10.10	32.75	6.96	25.20	278	0.03
	20	9.37	32.77	6.99	25.34	20	9.37	32.77	6.99	25.34	265	0.06
	30	8.20	32.77	7.21	25.52	30	8.20	32.77	7.21	25.52	248	0.08
	50	6.16	32.81	7.13	25.83	50	6.16	32.81	7.13	25.83	219	0.13
	75	4.61	32.85	7.16	26.04	75	4.61	32.85	7.16	26.04	199	0.18
	100	3.69	32.90	7.03	26.17	100	3.69	32.90	7.03	26.17	186	0.23
	125	3.42	33.09	6.12	26.35	150	3.48	33.49	3.95	26.66	140	0.31
	150	3.48	33.49	3.95	26.66	200	3.53	33.81	1.97	26.91	117	0.37
	200	3.53	33.81	1.97	26.91	250	3.52	33.94	1.22	27.01	107	0.43
	250	3.52	33.94	1.22	27.01	300	3.55	34.01	0.86	27.07	103	0.48
	325	3.58	34.02	0.84	27.07							
77	PIONEER; August 7, 1959; 0840, 0923 GCT; 49°00'N, 175°00'W; wind, 170°, 10 kt; weather, overcast; sea, smooth.											
	0	10.6	32.75	-	25.12	0	10.6	32.75		25.12	286	0.00
	10	10.34	32.73	6.84	25.15	10	10.34	32.73	6.84	25.15	283	0.03
	20	8.90	32.76	7.03	25.40	20	8.90	32.76	7.03	25.40	259	0.06
	30	7.88	32.78	7.20	25.57	30	7.88	32.78	7.20	25.57	243	0.08
	50	5.82	32.83	7.10	25.88	50	5.82	32.83	7.10	25.88	213	0.13
	75	4.44	32.87	6.96	26.07	75	4.44	32.87	6.96	26.07	195	0.18
	100	3.80	32.93	6.90	26.18	100	3.80	32.93	6.90	26.18	185	0.22
	125	3.44	33.21	5.15	26.44	150	3.46	33.66	2.80	26.80	127	0.30
	150	3.46	33.66	2.80	26.80	200	3.58	33.88	1.43	26.96	112	0.36
	200	3.58	33.88	1.43	26.96	250	3.62	33.96	0.86	27.02	107	0.42
	250	3.62	33.96	0.86	27.02	300	3.57	34.04	0.76	27.09	101	0.47
	300	3.57	34.04	0.76	27.09	400	3.48	34.14	0.75	27.18	93	0.57
						500	3.35	34.21	0.60	27.24	87	0.66
	382	3.50	34.13	0.80	27.17	600	3.18	34.24	0.60	27.28	84	0.74
	481	3.38	34.20	0.60	27.23	700	3.03	34.28	0.62	27.33	80	0.82
	678	3.06	34.27	0.62	27.32	800	2.88	34.32	0.63	27.38	76	0.90
	1028	2.59	34.41	0.68	27.47	1000	2.62	34.40	0.67	27.46	69	1.05
78	PIONEER; August 8, 1959; 0156 GCT; 48°28'N, 174°57'W; wind, 140°, 18 kt; weather, overcast; sea, moderate.											
	0	10.8	32.85	-	25.16	0	10.8	32.85		25.16	282	0.00
	10	10.50	32.78	6.73	25.16	10	10.50	32.78	6.73	25.16	282	0.03
	20	9.18	32.79	7.20	25.38	20	9.18	32.79	7.20	25.38	261	0.06
	30	7.62	32.81	7.03	25.63	30	7.62	32.81	7.03	25.63	237	0.08
	50	5.36	32.84	7.15	25.95	50	5.36	32.84	7.15	25.95	207	0.12
	75	4.32	32.87	7.19	26.08	75	4.32	32.87	7.19	26.08	194	0.17
	100	3.63	32.93	7.01	26.20	100	3.63	32.93	7.01	26.20	183	0.22
	125	3.30	33.25	5.43	26.49	150	3.40	33.54	3.60	26.71	136	0.30
	150	3.40	33.54	3.60	26.71	200	3.62	33.86	1.53	26.94	114	0.36
	200	3.62	33.86	1.53	26.94	250	3.59	33.96	1.04	27.02	106	0.42
	250	3.59	33.96	1.04	27.02	300	3.57	34.02	0.80	27.07	102	0.47
	325	3.57	34.04	0.76	27.09							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

PIONEER; August 9, 1959; 0402, 0456 GCT; 48°00'N, 175°00'W; wind, 180°, 4 kt; weather, cloudy; sea, smooth. 79

0	11.2	32.83	-	25.07	0	11.2	32.83		25.07	290	0.00
10	10.73	32.83	6.41	25.16	10	10.73	32.83	6.41	25.16	282	0.03
20	10.04	32.85	6.66	25.29	20	10.04	32.85	6.66	25.29	270	0.06
30	8.53	32.91	6.96	25.58	30	8.53	32.91	6.96	25.58	242	0.08
50	5.76	32.93	7.07	25.97	50	5.76	32.93	7.07	25.97	205	0.13
75	4.23	32.94	7.24	26.15	75	4.23	32.94	7.24	26.15	188	0.18
100	3.93	32.95	7.09	26.19	100	3.93	32.95	7.09	26.19	184	0.22
125	4.20	33.05	7.07	26.24	150	3.49	33.16	6.47	26.40	165	0.31
150	3.49	33.16	6.47	26.40	200	3.06	33.68	3.15	26.85	122	0.38
200	3.06	33.68	3.15	26.85	250	3.16	33.81	2.40	26.94	114	0.44
250	3.16	33.81	2.40	26.94	300	3.31	33.91	1.66	27.01	108	0.50
300	3.31	33.91	1.66	27.01	400	3.40	34.08	0.93	27.14	97	0.60
					500	3.35	34.16	0.91	27.20	91	0.69
393	3.40	34.07	0.93	27.13	600	3.21	34.22	0.83	27.27	86	0.78
492	3.36	34.16	0.92	27.20	700	3.07	34.27	0.77	27.32	81	0.86
692	3.08	34.27	0.77	27.32	800	2.93	34.32	0.73	27.37	77	0.94
1042	2.61	34.42	0.72	27.48	1000	2.66	34.40	0.71	27.46	69	1.09

PIONEER; August 10, 1959; 0432 GCT; 47°45'N, 173°30'W; wind, 150°, 15 kt; weather, fog, depositing rime; sea, smooth. 80

0	11.3	32.71	-	24.96	0	11.3	32.71		24.96	300	0.00
10	11.10	32.73	7.03	25.01	10	11.10	32.73	7.03	25.01	296	0.03
20	10.39	32.78	6.70	25.18	20	10.39	32.78	6.70	25.18	280	0.06
29	8.70	32.80	7.02	25.47	30	8.51	32.81	7.00	25.50	249	0.08
48	5.85	32.90	6.87	25.94	50	5.71	32.91	6.91	25.96	206	0.13
73	4.54	32.96	7.24	26.13	75	4.50	32.97	7.22	26.14	188	0.18
97	4.12	33.01	7.12	26.22	100	4.07	33.00	7.15	26.21	182	0.23
121	3.74	33.03	7.01	26.27	150	3.32	33.25	5.81	26.48	157	0.31
145	3.34	33.26	6.16	26.49	200	3.23	33.41		26.62	144	0.39
194	3.22	33.33	3.51	26.56	250	3.28	33.86		26.97	111	0.45
244	3.27	33.82	2.41	26.94	300	3.32	33.98		27.06	103	0.50
318	3.34	33.95	-	27.04							

PIONEER; August 12, 1959; 0420, 0519 GCT; 49°05'N, 170°10'W; wind, 070°, 20 kt; weather, overcast; sea, very rough. 81

0	10.7	32.75	-	25.10	0	10.7	32.75		25.10	287	0.00
10	10.60	32.75	6.59	25.12	10	10.60	32.75	6.59	25.12	286	0.03
19	10.45	32.74	6.45	25.13	20	10.18	32.75	6.53	25.19	279	0.06
29	8.06	32.80	7.09	25.56	30	7.89	32.80	7.10	25.59	241	0.08
48	5.52	32.84	7.19	25.93	50	5.43	32.84	7.19	25.94	208	0.13
72	4.55	32.86	7.15	26.05	75	4.43	32.86	7.16	26.06	196	0.18
97	3.75	32.90	7.09	26.16	100	3.70	32.89	7.17	26.16	187	0.23
121	3.46	32.98	6.75	26.26	150	3.35	33.51	3.84	26.69	137	0.31
145	3.33	33.47	4.12	26.66	200	3.50	33.83	1.92	26.93	115	0.37
194	3.48	33.81	2.02	26.91	250	3.56	33.94	1.32	27.01	108	0.43
243	3.56	33.93	1.37	27.00	300	3.54	34.00	1.08	27.06	103	0.48
292	3.54	33.99	1.11	27.05	400	3.51	34.11	0.76	27.15	96	0.58
					500	3.38	34.21	0.62	27.24	87	0.67
388	3.52	34.09	0.78	27.13	600	3.23	34.28	0.57	27.31	81	0.75
484	3.40	34.20	0.63	27.23	700	3.09	34.33	0.55	27.36	77	0.83
678	3.12	34.32	0.55	27.35	800	2.94	34.37	0.55	27.41	73	0.91
1022	2.60	34.42	0.65	27.48	1000	2.63	34.42	0.64	27.48	67	1.05

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
82	PIONEER; August 13, 1959; 0155 GCT; 49°31'N, 170°06'W; wind, 320°, 30 kt; weather, partly cloudy; sea, very rough.										
0	10.6	32.78	-	25.14	0	10.6	32.78		25.14	283	0.00
9	10.50	32.75	6.40	25.13	10	10.59	32.75	6.40	25.12	286	0.03
17	10.49	32.75	6.48	25.14	20	9.77	32.76	6.65	25.26	272	0.06
26	8.46	32.79	6.92	25.49	30	7.70	32.80	6.99	25.61	239	0.08
44	5.64	32.83	7.13	25.91	50	5.17	32.83	7.15	25.96	206	0.13
65	4.30	32.85	7.09	26.07	75	4.09	32.83	7.11	26.08	195	0.18
88	3.86	32.90	6.72	26.15	100	3.64	33.06	5.94	26.30	174	0.22
109	3.59	33.22	5.11	26.43	150	3.79	33.80	1.74	26.88	120	0.30
131	3.84	33.72	2.23	26.81	200	3.73	33.94	0.88	26.99	109	0.35
176	3.74	33.88	1.21	26.94							
220	3.74	33.97	0.74	27.02							
83	PIONEER; August 13, 1959; 2201 GCT; 50°27'N, 169°57'W; wind, 060°, 15 kt; weather, heavy rain; sea, slight.										
0	10.0	32.78	-	25.24	0	10.0	32.78		25.24	274	0.00
10	10.01	32.77	6.44	25.23	10	10.01	32.77	6.44	25.23	275	0.03
20	9.94	32.79	6.56	25.26	20	9.94	32.79	6.56	25.26	272	0.05
30	9.87	32.79	6.66	25.27	30	9.87	32.79	6.66	25.27	272	0.08
49	5.70	32.84	7.10	25.91	50	5.62	32.84	7.09	25.92	210	0.13
73	4.28	32.88	6.99	26.10	75	4.25	32.88	6.99	26.10	193	0.18
98	3.92	32.93	6.93	26.17	100	3.89	32.92	6.97	26.17	186	0.23
122	3.61	32.97	6.69	26.23	150	3.52	33.36	4.69	26.55	150	0.31
146	3.52	33.31	5.01	26.51	200	3.52	33.82	2.08	26.92	116	0.38
196	3.52	33.81	2.15	26.91	250	3.55	33.92	1.40	26.99	109	0.43
245	3.55	33.91	1.46	26.99	300	3.57	34.00	0.96	27.06	104	0.49
319	3.58	34.02	0.86	27.07							
84	PIONEER; August 14, 1959; 0207 GCT; 50°59'N, 170°03'W; wind, 060°, 22 kt; weather, heavy rain; sea, slight.										
0	9.9	32.78	-	25.26	0	9.9	32.78		25.26	272	0.00
10	9.80	32.75	6.03	25.25	10	9.80	32.75	6.03	25.25	273	0.03
20	9.73	32.77	6.64	25.28	20	9.73	32.77	6.64	25.28	270	0.05
29	8.82	32.78	6.59	25.43	30	8.54	32.78	6.62	25.47	252	0.08
48	4.93	32.85	7.08	26.00	50	4.86	32.85	7.07	26.01	201	0.12
73	4.24	32.87	7.01	26.09	75	4.22	32.87	7.02	26.09	193	0.17
97	3.98	32.89	7.11	26.13	100	3.93	32.88	7.16	26.13	190	0.22
121	3.67	32.91	7.03	26.18	150	3.55	33.22	5.41	26.44	161	0.31
144	3.54	33.11	6.00	26.35	200	3.60	33.77	2.25	26.87	120	0.38
192	3.60	33.75	2.43	26.85	250	3.57	33.90	1.39	26.98	111	0.44
241	3.58	33.88	1.51	26.96	300	3.53	33.97	1.02	27.04	106	0.49
315	3.51	33.98	1.01	27.05							
85	PIONEER; August 26, 1959; 2201 GCT; 53°00'N, 139°00'W; wind, 340°, 20 kt; weather, overcast; sea, very rough.										
0	12.8	32.43	-	24.46	0	12.8	32.43		24.46	348	0.00
10	12.67	32.39	6.10	24.46	10	12.67	32.39	6.10	24.46	348	0.04
20	12.54	32.39	6.05	24.48	20	12.54	32.39	6.05	24.48	346	0.07
30	10.91	32.47	6.45	24.85	30	10.91	32.47	6.45	24.85	312	0.10
50	7.18	32.63	6.27	25.55	50	7.18	32.63	6.27	25.55	245	0.16
75	6.50	32.81	6.16	25.78	75	6.50	32.81	6.16	25.78	223	0.22
99	6.14	32.99	5.75	25.97	100	6.15	33.02	5.66	25.99	203	0.27
124	6.24	33.51	4.17	26.37	150	5.86	33.73	3.92	26.59	148	0.36
148	5.86	33.72	3.98	26.58	200	5.70	33.86	2.89	26.71	136	0.43
198	5.72	33.86	2.91	26.71	250	5.25	33.89	2.42	26.79	130	0.50
298	4.88	33.93	2.00	26.86	300	4.87	33.93	1.99	26.86	123	0.56
523	4.06	34.13	0.66	27.11	400	4.32	34.01	1.28	26.99	112	0.68
					500	4.08	34.11	0.75	27.09	102	0.78

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
PIONEER; August 27, 1959; 0812 GCT; 53°00'N, 137°00'W; wind, 340°, 18 kt; weather, missing; sea, moderate.											86
0	13.2	32.38	-	24.35	0	13.2	32.38		24.35	359	0.00
9	13.12	32.33	5.98	24.33	10	13.17	32.32	5.99	24.31	363	0.04
18	13.12	32.33	6.13	24.33	20	12.96	32.36	6.16	24.38	356	0.07
27	12.12	32.45	6.28	24.61	30	11.19	32.48	6.35	24.80	316	0.11
46	7.67	32.61	6.53	25.47	50	7.50	32.63	6.47	25.51	249	0.16
69	6.76	32.75	6.29	25.70	75	6.51	32.77	6.35	25.75	226	0.22
92	6.05	32.88	6.24	25.90	100	5.98	32.96	5.99	25.97	206	0.28
115	6.00	33.12	5.44	26.09	150	6.27	33.52	4.07	26.37	168	0.37
138	6.37	33.40	4.35	26.26	200	5.68	33.78	3.34	26.65	142	0.45
184	5.93	33.77	3.44	26.61	250	5.01	33.83	3.02	26.77	131	0.52
276	4.72	33.85	2.84	26.82	300	4.49	33.87	2.68	26.86	123	0.58
492	4.02	34.05	1.05	27.05	400	3.95	33.96	1.88	26.99	111	0.70
PIONEER; August 27, 1959; 1842 GCT; 53°02'N, 134°57'W; wind, 340°, 15 kt; weather, partly cloudy; sea, moderate.											87
0	13.7	32.20	-	24.11	0	13.7	32.20		24.11	382	0.00
10	13.65	32.15	5.94	24.08	10	13.65	32.15	5.94	24.08	384	0.04
20	13.63	32.15	5.97	24.08	20	13.63	32.15	5.97	24.08	384	0.08
29	13.58	32.16	5.88	24.10	30	13.23	32.17	5.90	24.18	376	0.11
48	8.62	32.38	6.07	25.15	50	8.54	32.39	6.07	25.17	281	0.18
72	7.72	32.50	5.90	25.38	75	7.61	32.51	5.86	25.40	260	0.25
96	7.05	32.67	5.47	25.60	100	7.00	32.74	5.39	25.66	235	0.31
121	6.80	33.08	4.80	25.96	150	6.64	33.41	3.83	26.24	181	0.41
145	6.67	33.38	3.86	26.21	200	6.26	33.64	3.35	26.47	160	0.50
194	6.32	33.62	3.44	26.44	250	5.77	33.82	2.67	26.67	141	0.57
292	5.42	33.93	2.17	26.80	300	5.36	33.95	2.08	26.82	127	0.64
513	4.38	34.09	0.81	27.05	400	4.74	34.10	1.24	27.01	110	0.76
					500	4.40	34.10	0.83	27.05	107	0.87
PIONEER; August 28, 1959; 0142 GCT; 53°00'N, 133°30'W; wind, 340°, 15 kt; weather, partly cloudy; sea, moderate.											88
0	14.6	32.25	-	23.96	0	14.6	32.25		23.96	396	0.00
10	14.43	32.17	5.78	23.94	10	14.43	32.17	5.78	23.94	398	0.04
19	14.24	32.17	5.82	23.98	20	14.31	32.17	5.82	23.96	396	0.08
28	14.24	32.18	5.84	23.98	30	13.55	32.20	5.89	24.14	379	0.12
48	9.02	32.38	6.10	25.09	50	8.88	32.40	6.06	25.13	286	0.18
71	7.76	32.55	5.68	25.41	75	7.67	32.56	5.70	25.43	257	0.25
95	7.33	32.69	5.50	25.58	100	7.28	32.77	5.31	25.65	236	0.32
118	7.12	33.05	4.69	25.89	150	6.83	33.44	3.92	26.24	181	0.42
142	6.93	33.37	4.09	26.17	200	6.18	33.74	2.99	26.56	151	0.50
190	6.32	33.71	3.15	26.52	250	5.54	33.88	2.27	26.75	134	0.57
284	5.18	33.95	1.86	26.84	300	5.03	33.98	1.69	26.89	121	0.64
497	4.22	34.11	0.72	27.08	400	4.38	34.10	0.93	27.05	106	0.75

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

TORDENSKJOLD; May 25, 1959; 1010 GCT;[a] 53°17'N, 165°35'W; wind, 220°, 5 kt; weather, overcast; sea, smooth. 1

0	6.1	32.49	-	25.58	0	6.1	32.49		25.58	241	0.00
10	6.12	-	7.83		10	6.12	32.49	7.83	25.58	242	0.02
19	6.07	32.50	7.80	25.59	20	6.06	32.50	7.81	25.59	240	0.05
29	-	32.52	7.74		30	5.81	32.52	7.67	25.64	236	0.07
48	4.96	32.64	6.83	25.83	50	4.80	32.66	6.87	25.87	215	0.12
72	3.86	32.87	6.64	26.13	75	3.96	32.91	6.43	26.15	188	0.17
96	4.55	33.18	5.11	26.31	100	4.65	33.23	4.89	26.33	171	0.21
119	5.01	33.45	4.00	26.47	150	4.97	33.70	2.69	26.67	139	0.29
143	5.22	33.67	3.06	26.62	200	3.98	33.88	1.08	26.92	116	0.35
192	3.99	33.86	1.14	26.90	250	3.93	33.96	0.72	26.99	110	0.41
240	3.94	33.95	0.77	26.98	300	3.90	34.01	0.49	27.03	106	0.46
315	3.89	34.01	0.45	27.03							

TORDENSKJOLD; May 26, 1959; 0138 GCT; 53°04'N, 167°03'W; wind, 080°, 5 kt; weather, overcast; sea, smooth. 2

0	5.3	32.25	-	25.49	0	5.3	32.25		25.49	250	0.00
10	5.08	32.25	8.89	25.51	10	5.08	32.25	8.89	25.51	248	0.02
19	4.50	32.30	7.97	25.61	20	4.51	32.30	7.94	25.61	238	0.05
28	-	32.32	7.74		30	4.54	32.31	7.75	25.62	238	0.07
46	4.34	32.32	7.58	25.65	50	4.25	32.35	7.37	25.68	232	0.12
70	-	32.52	6.52		75	4.07	32.60	6.36	25.90	212	0.18
94	4.20	32.80	5.98	26.04	100	4.23	32.82	5.99	26.05	197	0.23
118	4.28	32.87	5.92	26.09	150	4.29	32.94	5.71	26.14	189	0.32
142	4.26	32.93	5.64	26.14	200	4.62	33.34	4.31	26.42	163	0.41
190	4.50	33.16	5.08	26.30	250	4.84	33.91	1.72	26.85	123	0.48
238	4.84	33.82	2.15	26.78	300	4.47	33.99	1.24	26.96	114	0.54
310	4.32	33.94	1.40	26.93							

TORDENSKJOLD; May 26, 1959; 0630 GCT; 52°40'N, 167°37'W; wind, 120°, 5 kt; weather, overcast; sea, smooth. 3

0	5.4	32.21	-	25.44	0	5.4	32.21		25.44	254	0.00
10	5.33	32.21	8.80	25.45	10	5.33	32.21	8.80	25.45	254	0.02
19	-	32.21	8.75		20	4.72	32.21	8.70	25.52	247	0.05
29	4.50	32.22	8.31	25.55	30	4.47	32.23	8.24	25.56	244	0.08
48	4.08	32.39	7.37	25.73	50	4.08	32.40	7.32	25.74	227	0.12
72	4.17	32.49	6.93	25.80	75	4.21	32.51	6.92	25.81	220	0.18
96	4.37	32.64	6.72	25.90	100	4.37	32.67	6.62	25.92	210	0.23
119	4.36	32.79	6.24	26.02	150	4.55	33.05	5.58	26.20	184	0.33
143	4.38	32.95	6.04	26.14	200	5.14	33.57	3.32	26.55	152	0.41
192	5.16	33.52	3.49	26.51	250	4.89	33.80	2.32	26.76	132	0.48
240	4.96	33.76	2.50	26.72	300	4.43	33.89	1.55	26.88	121	0.55
315	4.25	33.90	1.37	26.91							

TORDENSKJOLD; May 27, 1959; 0141 GCT; 52°14'N, 168°51'W; wind, 150°, 10 kt; weather, overcast; sea, smooth. 4

0	5.7	32.83	-	25.90	0	5.7	32.83		25.90	211	0.00
10	5.49	32.83	7.40	25.92	10	5.49	32.83	7.40	25.92	209	0.02
19	4.74	32.83	7.59	26.01	20	4.67	32.83	7.62	26.02	200	0.04
28	-	32.83	7.74		30	4.22	32.83	7.71	26.06	196	0.06
46	4.10	32.84	7.46	26.08	50	4.09	32.82	7.49	26.07	196	0.10
70	-	32.84	7.30		75	3.68	32.88	7.17	26.16	187	0.15
94	3.30	33.07	6.20	26.34	100	3.48	33.16	5.62	26.40	164	0.19
118	3.87	33.43	3.94	26.57	150	4.06	33.80	1.64	26.85	122	0.26
142	4.08	33.77	1.88	26.82	200	3.97	33.94	0.64	26.97	111	0.32
190	3.98	33.93	0.73	26.96	250	3.91	34.00	0.39	27.02	107	0.38
238	3.93	33.99	0.43	27.01	300	3.79	34.04	0.43	27.07	103	0.43
309	3.76	34.05	0.46	27.08							

a) Times are reported in the order of casts; the deep casts were taken first.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m
5	TORDENSKJOLD; May 27, 1959; 0652 GCT; 51°56'N, 169°39'W; wind, 150°, 8 kt; weather, overcast; sea, smooth.										
0	5.3	32.66	-	25.81	0	5.3	32.66		25.81	220	0.00
9	5.24	32.66	8.06	25.82	10	5.25	32.66	8.08	25.82	219	0.02
18	-	32.67	8.02		20	5.10	32.67	7.90	25.84	217	0.04
28	-	32.69	7.53		30	4.73	32.69	7.50	25.90	212	0.06
46	4.30	32.75	7.28	25.99	50	4.29	32.79	7.26	26.02	200	0.11
68	-	32.95	6.98		75	3.84	32.95	6.99	26.20	184	0.15
92	3.52	33.10	6.09	26.35	100	3.69	33.31	4.75	26.50	155	0.20
115	3.92	33.60	2.82	26.70	150	4.00	33.86	1.01	26.90	117	0.26
137	4.02	33.80	1.37	26.85	200	3.95	33.98		27.00	108	0.32
183	3.96	33.96	0.45	26.99	250	3.90	34.04		27.06	104	0.37
228	3.93	34.02	-	27.04							
298	3.82	34.09	-	27.10							
6	TORDENSKJOLD; May 28, 1959; 0705 GCT; 51°43'N, 173°04'W; wind, 140°, 15 kt; weather, overcast; sea, smooth.										
0	5.7	32.73	-	25.82	0	5.7	32.73		25.82	219	0.00
10	5.37	32.74	7.88	25.87	10	5.37	32.74	7.88	25.87	214	0.02
19	-	32.74	7.82		20	4.54	32.74	7.82	25.96	206	0.04
28	4.30	32.78	7.75	26.01	30	4.28	32.79	7.71	26.02	199	0.06
46	-	32.83	7.45		50	4.12	32.83	7.52	26.07	195	0.10
70	3.99	32.88	7.47	26.13	75	3.94	32.90	7.36	26.15	188	0.15
94	3.76	32.96	7.02	26.21	100	3.67	33.09	6.96	26.32	172	0.20
118	3.55	33.45	6.74	26.62	150	3.83	33.86	3.80	26.92	116	0.27
142	3.69	33.84	4.37	26.92	200	4.16	33.97	1.25	26.97	111	0.32
190	4.21	33.95	1.64	26.95	250	3.98	34.06	0.52	27.06	103	0.38
238	4.01	34.04	0.52	27.04	300	3.98	34.17	0.60	27.15	95	0.43
310	3.94	-	0.78								
7	TORDENSKJOLD; June 1, 1959; 0949 GCT; 51°30'N, 177°02'W; wind, 350°, 15 kt; weather, clear; sea, slight.										
0	5.1	32.89	-	26.02	0	5.1	32.89		26.02	200	0.00
9	5.27	32.95	7.69	26.04	10	5.12	32.96	7.55	26.07	195	0.02
18	4.34	33.04	6.81	26.22	20	4.34	33.05	6.81	26.22	180	0.04
26	4.34	-	6.81		30	4.31	33.07	6.78	26.24	179	0.06
44	4.21	33.09	6.62	26.27	50	4.17	33.10	6.52	26.28	175	0.09
67	4.08	33.14	6.31	26.32	75	4.04	33.15	6.36	26.33	170	0.14
89	3.98	33.20	6.18	26.38	100	3.94	33.30	5.58	26.46	158	0.18
112	3.92	33.38	5.10	26.53	150	3.94	33.47	4.47	26.60	146	0.25
134	3.92	33.43	4.73	26.57	200	3.90	33.54	4.02	26.66	141	0.32
180	3.95	33.53	4.09	26.65	250	4.05	33.63	3.33	26.71	136	0.39
226	3.90	33.58	3.80	26.69	300	(4.35)	(33.79)	(2.40)	(26.81)	(127)	(0.46)
295	4.32	33.77	2.49	26.80							
8	TORDENSKJOLD; June 2, 1959; 0212, 0328 GCT; 51°00'N, 180°00'; wind, 060°, 6 kt; weather, overcast; sea, smooth.										
0	5.5	32.99	-	26.05	0	5.5	32.99		26.05	197	0.00
10	5.10	33.00	7.57	26.10	10	5.10	33.00	7.57	26.10	192	0.02
20	4.60	33.00	7.36	26.16	20	4.60	33.00	7.36	26.16	187	0.04
28	4.52	33.01	7.24	26.17	30	4.47	33.03	7.15	26.20	183	0.06
47	4.14	33.14	6.55	26.32	50	4.13	33.15	6.48	26.33	171	0.09
71	4.09	33.18	6.17	26.35	75	4.10	33.19	6.16	26.36	168	0.13
96	4.10	33.22	6.08	26.38	100	4.10	33.22	6.08	26.38	166	0.18
121	4.03	33.23	5.92	26.40	150	3.86	33.32	5.50	26.49	156	0.26
144	3.88	33.30	5.52	26.47	200	3.84	33.40	5.00	26.55	150	0.33
192	3.81	33.40	5.15	26.56	250	3.88	33.48	4.20	26.61	145	0.41
240	3.90	33.45	4.30	26.59	300	3.79	33.62	3.53	26.73	134	0.48
289	3.82	33.58	3.72	26.70	400	3.72	33.91	1.83	26.97	113	0.60
					500	3.82	34.09	0.58	27.10	101	0.71
388	3.69	33.88	2.06	26.95	600	3.67	34.16	0.53	27.17	95	0.81
484	3.84	34.08	0.59	27.09	700	3.49	34.22	0.50	27.24	89	0.90
676	3.54	34.21	0.50	27.23	800	3.28	34.27	0.49	27.30	84	0.98
935	3.00	34.35	0.49	27.39	1000	(2.86)	(34.39)	(0.49)	(27.43)	(72)	(1.14)

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

TORDENSKJOLD; June 3, 1959; 0235 GCT; 50°30'N, 180°00'; wind, 070°, 20 kt; weather, overcast; sea, smooth. 9

0	5.8	32.72	-	25.80	0	5.8	32.72		25.80	221	0.00
10	-	32.72	8.69		10	5.75	32.72	8.69	25.81	220	0.02
19	5.36	32.72	8.41	25.85	20	5.31	32.73	8.33	25.87	215	0.04
28	4.89	32.83	7.77	25.99	30	4.75	32.85	7.64	26.02	200	0.06
47	3.93	32.99	6.70	26.22	50	3.91	33.01	6.60	26.24	180	0.10
71	3.87	33.17	5.94	26.37	75	3.90	33.20	5.81	26.39	165	0.15
95	3.96	33.31	5.34	26.47	100	3.92	33.32	5.35	26.48	157	0.19
119	3.88	33.38	5.14	26.53	150	4.06	33.46	4.30	26.58	148	0.26
142	4.06	33.45	4.39	26.57	200	4.13	33.62	3.37	26.70	137	0.33
190	4.10	33.56	3.65	26.65	250	4.20	33.82	2.09	26.85	123	0.40
238	4.19	33.78	2.37	26.82	300	4.15	33.88	1.06	26.90	118	0.46
311	4.13	33.87	0.87	26.90							

TORDENSKJOLD; June 3, 1959; 0658, 0746 GCT; 49°59'N, 179°57'W; wind, 360°, 15 kt; weather, overcast; sea, smooth. 10

0	5.4	32.80	-	25.91	0	5.4	32.80		25.91	210	0.00
10	-	32.78	7.32		10	5.29	32.78	7.32	25.91	210	0.02
18	5.14	32.79	7.30	25.93	20	5.14	32.78	7.36	25.92	209	0.04
28	5.01	32.78	7.48	25.94	30	4.86	32.79	7.45	25.96	205	0.06
47	3.98	32.89	7.15	26.13	50	3.95	32.89	7.08	26.14	189	0.10
71	3.82	32.98	6.50	26.22	75	3.81	33.01	6.41	26.25	179	0.15
94	3.83	33.20	5.62	26.40	100	3.88	33.29	5.13	26.46	158	0.19
118	4.02	33.52	3.81	26.63	150	4.10	33.75	2.17	26.80	126	0.26
142	-	33.72	2.37		200	4.01	33.91	1.14	26.94	114	0.32
190	4.00	33.89	1.33	26.93	250	3.93	34.00	0.64	27.02	107	0.38
238	3.99	33.98	0.66	27.00	300	3.78	34.06	0.56	27.08	101	0.43
287	3.79	34.04	0.57	27.07	400	3.69	34.15	0.52	27.16	94	0.53
					500	3.55	34.21	0.46	27.23	89	0.62
380	3.71	34.14	0.53	27.15	600	3.35	34.26	0.44	27.28	84	0.70
478	3.59	34.20	0.47	27.21	700	3.17	34.30	0.44	27.33	80	0.79
672	3.22	34.29	0.44	27.32	800	2.99	34.34	0.46	27.38	76	0.86
1014	2.59a)	34.42	0.56	27.48a)	1000	2.67	34.42	0.55	27.47	68	1.01

TORDENSKJOLD; June 4, 1959; 0255 GCT; 49°30'N, 179°58'W; wind, 230°, 10 kt; weather, overcast; sea, smooth. 11

0	5.5	33.03	-	26.08	0	5.5	33.03		26.08	194	0.00
10	5.35	33.02	7.48	26.09	10	5.35	33.02	7.48	26.09	193	0.02
20	5.22	33.02	7.59	26.10	20	5.22	33.02	7.59	26.10	192	0.04
28	5.20	33.02	7.41	26.11	30	5.09	33.02	7.44	26.12	190	0.06
46	4.42	33.02	7.57	26.19	50	4.33	33.02	7.58	26.20	183	0.09
71	3.98	33.03	7.54	26.25	75	3.96	33.03	7.48	26.25	179	0.14
94	3.87	33.04	7.28	26.26	100	3.90	33.03	7.40	26.25	178	0.18
118	3.74	33.07	7.26	26.30	150	2.98	33.39	5.41	26.63	143	0.26
142	2.98	33.32	5.88	26.57	200	3.12	33.72	3.07	26.88	120	0.33
190	3.06	33.68	3.44	26.85	250	3.32	33.89	1.74	26.99	109	0.39
239	3.29	33.86	1.96	26.97	300	3.39	33.96	1.24	27.04	105	0.44
313	3.38	33.96	1.25	27.04							

a) Alternate values: temperature, 2.70°C; sigma-t, 27.47 g/L.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
12	TORDENSKJOLD; June 4, 1959; 0739, 0856 GCT; 49°03'N, 179°56'W; wind, 190°, 8 kt; weather, overcast; sea, smooth.											
	0	5.6	32.94	-	26.00	0	5.6	32.94		26.00	202	0.00
	10	5.57	32.93	7.24	25.99	10	5.57	32.93	7.24	25.99	202	0.02
	20	5.41	32.94	6.82	26.02	20	5.41	32.94	6.82	26.02	200	0.04
	30	5.12	32.93	6.23	26.05	30	5.12	32.93	6.23	26.05	198	0.06
	50	4.43	32.93	7.06	26.12	50	4.43	32.93	7.06	26.12	191	0.10
	74	3.98	32.93	7.31	26.17	75	3.98	32.93	7.31	26.17	186	0.15
	98	3.94	32.93	7.28	26.17	100	3.95	32.93	7.29	26.17	186	0.19
	123	3.82	32.95	7.26	26.20	150	3.19	33.14	6.50	26.41	164	0.28
	147	3.22	33.09	6.78	26.37	200	2.99	33.69	3.15	26.86	121	0.35
	196	2.96	33.67	3.27	26.85	250	3.24	33.86	2.02	26.98	111	0.41
	245	3.22	33.85	2.08	26.97	300	3.37	33.93	1.46	27.02	107	0.46
	294	3.36	33.92	1.50	27.01	400	3.45	34.10	0.77	27.15	96	0.56
						500	3.45	34.22	0.36	27.24	87	0.66
	376	3.44	34.06	0.91	27.12	600	3.35	34.29	0.21	27.31	82	0.74
	776	2.96	34.32	0.63	27.37	700	3.16	34.32	0.35	27.35	78	0.82
13	TORDENSKJOLD; June 7, 1959; 0706, 0831 GCT; 49°01'N, 175°04'W; wind, 320°, 25 kt; weather, overcast; sea, moderate.											
	0	5.4	32.85	-	25.95	0	5.4	32.85		25.95	206	0.00
	10	5.20	32.85	6.88	25.97	10	5.20	32.85	6.88	25.97	204	0.02
	20	5.18	32.85	6.96	25.98	20	5.18	32.85	6.96	25.98	204	0.04
	30	5.24	32.86	6.98	25.98	30	5.24	32.86	6.98	25.98	204	0.06
	50	5.00	32.86	7.02	26.00	50	5.00	32.86	7.02	26.00	202	0.10
	74	3.96	32.88	7.20	26.13	75	3.95	32.88	7.20	26.13	190	0.15
	98	3.69	32.91	-	26.18	100	3.63	32.91	7.18	26.18	185	0.20
	123	3.20	33.00	6.84	26.30	150	3.35	33.36	4.47	26.57	149	0.28
	147	3.32	33.32	4.70	26.54	200	3.61	33.84	1.74	26.93	115	0.35
	197	3.61	33.83	1.79	26.92	250	3.53	33.93	1.10	27.00	108	0.40
	246	3.54	33.92	1.12	27.00	300	3.48	34.00	0.86	27.07	103	0.46
	296	3.48	33.99	0.86	27.06	400	3.46	34.12	0.78	27.16	94	0.55
						500	3.36	34.21	0.71	27.24	87	0.64
	376	3.47	34.09	0.81	27.14	600	3.22	34.26	0.63	27.30	83	0.73
	474	3.40	34.19	0.73	27.22	700	3.08	34.31	0.60	27.35	78	0.81
	672	3.12	34.30	0.60	27.34	800	2.94	34.36	0.62	27.40	74	0.89
	1018	2.64	34.43	0.78	27.48	1000	2.66	34.43	0.76	27.48	67	1.03
14	TORDENSKJOLD; June 12, 1959; 0812 GCT; 51°32'N, 176°31'W; wind, 270°, 20 kt; weather, overcast; sea, slight.											
	0	5.0	32.68	-	25.86	0	5.0	32.68		25.86	215	0.00
	10	4.96	32.71	6.79	25.89	10	4.96	32.71	6.79	25.89	212	0.02
	19	4.96	32.71	6.69	25.89	20	4.97	32.72	6.71	25.90	212	0.04
	28	4.98	32.79	6.81	25.95	30	4.94	32.80	6.83	25.96	205	0.06
	47	4.61	32.96	6.74	26.12	50	4.51	33.01	6.55	26.18	185	0.10
	71	4.03	33.27	5.62	26.43	75	4.01	33.27	5.69	26.43	161	0.14
	94	3.98	33.31	5.44	26.47	100	4.04	33.33	4.92	26.48	157	0.18
	117	4.13	33.38	3.95	26.51	150	4.08	33.44	3.88	26.56	150	0.26
	141	4.10	33.43	3.88	26.55	200	4.12	33.53	3.70	26.63	144	0.34
	188	4.07	33.50	-	26.61	250	4.26	33.66	3.19	26.72	136	0.40
	236	4.23	33.62	3.36	26.69	300	4.35	33.80	2.36	26.82	127	0.47
	305	4.35	33.81	2.26	26.83							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m	

TORDENSKJOLD; June 14, 1959; 0326 GCT; 51°32'N, 176°30'W; wind, 170°, 20 kt; weather, moderate rain; sea, slight. 15

0	5.4	32.84	-	25.94	0	5.4	32.84		25.94	207	0.00
10	4.82	32.92	6.96	26.07	10	4.82	32.92	6.96	26.07	195	0.02
20	4.55	33.05	6.38	26.20	20	4.55	33.05	6.38	26.20	182	0.04
30	-	33.22	5.53		30	4.44	33.22	5.53	26.35	169	0.06
50	3.98	33.27	5.50	26.44	50	3.98	33.27	5.50	26.44	161	0.09
75	3.96	33.34	5.35	26.49	75	3.96	33.34	5.35	26.49	155	0.13
100	3.98	33.38	4.95	26.52	100	3.98	33.38	4.95	26.52	153	0.17
125	4.02	33.41	4.74	26.54	150	4.03	33.46	4.50	26.58	148	0.24
150	4.03	33.46	4.50	26.58	200	4.04	33.52	4.03	26.63	144	0.32
200	4.04	33.52	4.03	26.63	250	3.96	33.61	3.58	26.71	136	0.38
250	3.96	33.61	3.58	26.71	300	3.98	33.82	2.05	26.87	121	0.45
325	4.03	33.97	0.88	26.99							

TORDENSKJOLD; June 15, 1959; 0682 GCT; 51°31'N, 176°25'W; wind, 300°, 25 kt; weather, overcast; sea, moderate. 16

0	5.9	32.66	-	25.74	0	5.9	32.66		25.74	226	0.00
8	5.70	32.68	7.13	25.78	10	5.70	32.68	7.13	25.78	223	0.02
17	5.73	32.68	7.02	25.78	20	5.78	32.67	6.84	25.76	224	0.04
26	-	32.68	6.59		30	5.60	32.77	6.65	25.86	215	0.07
44	5.06	33.02	6.65	26.12	50	4.89	33.06	6.45	26.17	186	0.11
68	4.52	-	5.85		75	4.48	33.17	5.54	26.31	173	0.15
90	4.38	33.23	5.08	26.36	100	4.27	33.29	4.98	26.42	162	0.19
113	4.16	33.34	4.87	26.47	150	4.05	33.44	4.41	26.56	149	0.27
136	4.08	33.38	4.68	26.51	200	4.13	33.67	3.19	26.74	133	0.34
182	4.04	33.58	3.72	26.68	250	4.17	33.82	2.07	26.85	123	0.41
226	4.20	33.77	2.55	26.81	300	(4.00)	(33.94)	(1.51)	(26.97)	(112)	(0.46)
296	4.02	33.93	1.53	26.96							

TORDENSKJOLD; June 20, 1959; 1937 GCT; 52°04'N, 176°19'W; wind, 140°, 7 kt; weather, overcast; sea, moderate. 17

0	5.5	33.13	-	26.16	0	5.5	33.13		26.16	186	0.00
10	5.28	33.14	6.90	26.19	10	5.28	33.14	6.90	26.19	183	0.02
20	5.08	33.14	7.06	26.22	20	5.08	33.14	7.06	26.22	181	0.04
30	4.87	33.13	6.52	26.23	30	4.87	33.13	6.52	26.23	180	0.05
49	4.52	33.15	6.52	26.29	50	4.52	33.15	6.50	26.29	175	0.09
73	4.44	33.17	6.08	26.31	75	4.40	33.17	6.08	26.31	172	0.13
98	3.98	33.22	6.03	26.40	100	3.95	33.23	5.99	26.41	164	0.17
122	3.67	33.30	5.77	26.49	150	3.38	33.32	5.95	26.53	152	0.25
146	3.42	33.32	5.88	26.53	200	3.23	33.33	5.97	26.56	150	0.33
194	3.19	33.33	6.08	26.56	250	3.54	33.42	4.74	26.60	146	0.40
243	3.50	33.40	4.95	26.59	300	3.74	33.67	2.93	26.78	130	0.47
316	3.78	33.78	2.23	26.86							

TORDENSKJOLD; June 21, 1959; 0714, 0817 GCT; 52°59'N, 175°00'W; wind, 080°, 10 kt; weather, overcast; sea, moderate. 18

0	5.6	33.12	-	26.14	0	5.6	33.12		26.14	188	0.00
10	5.69	33.10	7.48	26.11	10	5.69	33.10	7.48	26.11	191	0.02
20	5.66	33.10	7.48	26.12	20	5.66	33.10	7.48	26.12	191	0.04
30	5.48	33.10	7.43	26.14	30	5.48	33.10	7.43	26.14	189	0.06
50	4.95	33.14	7.17	26.23	50	4.95	33.14	7.17	26.23	180	0.09
74	4.14	33.16	6.61	26.33	75	4.13	33.16	6.61	26.33	170	0.14
98	3.98	33.17	6.48	26.36	100	3.97	33.17	6.47	26.36	168	0.18
123	3.88	33.19	6.28	26.38	150	3.89	33.24	6.08	26.42	163	0.26
148	3.91	33.24	6.08	26.42	200	3.58	33.31	5.87	26.51	155	0.34
197	3.60	33.31	5.88	26.50	250	3.52	33.38	5.26	26.57	149	0.42
246	3.49	33.37	5.39	26.56	300	(3.88)	(33.54)	(3.91)	(26.66)	(141)	(0.49)
296	3.86	33.53	4.01	26.65							
660	3.38	34.15	0.72	27.19							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
19	TORDENSKJOLD; June 22, 1959; 0112 GCT; 53°37'N, 175°27'W; wind, 050°, 7 kt; weather, overcast; sea, moderate.										
0	6.2	33.13		26.07	0	6.2	33.13		26.07	195	0.00
10	5.68	33.10		26.11	10	5.68	33.10		26.11	191	0.02
20	5.58	33.10		26.13	20	5.58	33.10		26.13	190	0.04
30	5.12	33.11		26.19	30	5.12	33.11		26.19	184	0.06
50	4.66	33.12		26.25	50	4.66	33.12		26.25	179	0.09
75	3.88	33.19		26.38	75	3.88	33.19		26.38	166	0.14
100	3.74	33.26		26.45	100	3.74	33.26		26.45	159	0.18
125	3.44	33.28		26.50	150	3.46	33.29		26.50	155	0.26
150	3.46	33.29		26.50	200	3.49	33.40		26.59	147	0.33
200	3.49	33.40		26.59	250	3.82	33.56		26.68	139	0.40
250	3.82	33.56		26.68	300	3.93	33.71		26.79	129	0.47
325	3.91	33.78		26.85							
20	TORDENSKJOLD; June 22, 1959; 0650, 0727 GCT; 54°00'N, 176°00'W; wind, 070°, 5 kt; weather, overcast; sea, moderate.										
0	5.8	33.13	-	26.12	0	5.8	33.13		26.12	190	0.00
10	5.66	33.12	7.62	26.13	10	5.66	33.12	7.62	26.13	189	0.02
20	5.48	33.13	7.67	26.16	20	5.48	33.13	7.67	26.16	186	0.04
30	5.11	33.15	7.34	26.22	30	5.11	33.15	7.34	26.22	181	0.06
50	4.15	33.18	7.46	26.35	50	4.15	33.18	7.46	26.35	169	0.09
75	3.08	33.21	7.25	26.47	75	3.08	33.21	7.25	26.47	157	0.13
100	2.78	33.24	6.97	26.52	100	2.78	33.24	6.97	26.52	152	0.17
125	2.36	33.23	7.09	26.55	150	2.45	33.24	6.89	26.55	150	0.25
150	2.45	33.24	6.89	26.55	200	3.78	33.60	2.58	26.72	135	0.32
200	3.78	33.60	2.58	26.72	250	3.78	33.75	2.26	26.84	124	0.38
250	3.78	33.75	2.26	26.84	300	3.77	33.87	1.62	26.93	115	0.44
300	3.77	33.87	1.62	26.93	400	3.70	34.04	0.93	27.08	103	0.55
					500	3.56	34.14	0.71	27.17	94	0.65
368	3.71	34.00	1.04	27.04	600	3.35	34.21	0.63	27.24	88	0.74
464	3.64	34.11	0.74	27.14	700	3.17	34.26	0.56	27.30	83	0.83
660	3.24	34.24	-	27.28	800	3.03	34.30	0.52	27.35	79	0.91
1002	2.82	34.32	0.49	27.38	1000	2.82	34.32	0.49	27.38	77	1.06
21	TORDENSKJOLD; June 23, 1959; 0237 GCT; 54°30'N, 176°00'W; wind, 060°, 10 kt; weather, overcast; sea, moderate.										
0	6.1	33.16		26.11	0	6.1	33.16		26.11	191	0.00
10	5.82	33.13		26.12	10	5.82	33.13		26.12	190	0.02
20	5.77	33.13		26.13	20	5.77	33.13		26.13	190	0.04
30	5.56	33.13		26.15	30	5.56	33.13		26.15	188	0.06
50	4.44	33.17		26.31	50	4.44	33.17		26.31	173	0.09
74	3.41	33.20		26.44	75	3.40	33.20		26.44	161	0.14
98	3.01	33.24		26.50	100	2.94	33.24		26.51	154	0.17
122	2.50	33.24		26.55	150	2.65	33.27		26.56	149	0.25
147	2.61	33.26		26.55	200	3.32	33.47		26.66	140	0.32
196	3.24	33.44		26.64	250	3.96	33.75		26.82	126	0.39
246	3.93	33.73		26.81	300	3.98	33.87		26.91	118	0.45
321	3.80	33.87		26.93							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
TORDENSKJOLD; June 23, 1959; 0723, 0826 GCT; 55°00'N, 176°00'W; wind, 060°, 5 kt; weather, overcast; sea, moderate.											22
0	6.2	33.11	-	26.06	0	6.2	33.11		26.06	196	0.00
8	6.10	33.08	7.67	26.05	10	6.00	33.08	7.56	26.06	196	0.02
16	5.69	33.08	7.39	26.10	20	5.45	33.10	7.48	26.14	188	0.04
24	-	33.12	7.54		30	4.75	33.15	7.47	26.26	177	0.06
42	4.02	33.19	7.32	26.37	50	3.69	33.19	7.16	26.40	164	0.09
62	3.35	33.20	7.00	26.44	75	3.28	33.20	7.03	26.45	160	0.13
84	3.23	33.21	6.84	26.46	100	3.14	33.23	6.82	26.48	156	0.17
105	3.11	33.24	-	26.49	150	2.66	33.40	6.83	26.66	140	0.24
126	3.02	33.25	6.60	26.51	200	3.55	33.57	4.76	26.72	135	0.31
168	2.69	33.49	6.54	26.73	250	3.92	33.90	3.09	26.94	114	0.38
210	3.72	33.62	4.31	26.74	300	3.87	33.96	2.21	26.99	110	0.43
252	3.93	33.91	3.04	26.95	400	3.71	34.11	1.29	27.13	98	0.54
					500	3.53	34.26	1.00	27.27	85	0.63
375	3.76	34.06	1.37	27.09	600	3.40	34.35	0.74	27.35	78	0.71
472	3.58	34.22	1.08	27.23							
671	3.32	-	0.58								
TORDENSKJOLD; June 24, 1959; 0233 GCT; 55°30'N, 176°00'W; wind, 050°, 7 kt; weather, overcast; sea, moderate.											23
0	6.5	33.09		26.00	0	6.5	33.09		26.00	201	0.00
10	6.32	33.09		26.03	10	6.32	33.09		26.03	199	0.02
20	5.66	33.12		26.13	20	5.66	33.12		26.13	189	0.04
30	5.48	33.12		26.15	30	5.48	33.12		26.15	187	0.06
50	4.14	33.18		26.35	50	4.14	33.18		26.35	169	0.09
74	3.43	33.20		26.43	75	3.41	33.20		26.44	161	0.14
98	3.18	33.22		26.47	100	3.19	33.23		26.48	157	0.18
123	3.16	33.27		26.51	150	2.96	33.27		26.53	152	0.25
147	2.94	33.26		26.53	200	3.42	33.42		26.61	145	0.33
196	3.36	33.40		26.60	250	3.89	33.66		26.75	132	0.40
246	3.87	33.64		26.74	300	3.96	33.80		26.86	122	0.46
321	3.86	33.84		26.90							
TORDENSKJOLD; June 24, 1959; 0652, 0755 GCT; 56°00'N, 176°00'W; wind, 050°, 2 kt; weather, overcast; sea, moderate.											24
0	6.1	32.80	-	25.83	0	6.1	32.80		25.83	218	0.00
10	5.90	32.75	7.75	25.81	10	5.90	32.75	7.75	25.81	220	0.02
20	5.44	32.75	7.49	25.87	20	5.44	32.75	7.49	25.87	214	0.04
30	4.99	32.80	7.50	25.96	30	4.99	32.80	7.50	25.96	206	0.06
50	3.95	33.03	6.97	26.25	50	3.95	33.03	6.97	26.25	178	0.10
75	3.72	33.15	6.24	26.37	75	3.72	33.15	6.24	26.37	167	0.15
100	3.33	33.21	6.76	26.45	100	3.33	33.21	6.76	26.45	159	0.19
125	3.12	33.24	-	26.49	150	2.94	33.26	6.66	26.53	152	0.26
149	2.94	33.26	6.66	26.53	200	3.12	33.35	5.75	26.58	148	0.34
199	3.10	33.34	5.82	26.58	250	3.83	33.65	3.12	26.75	132	0.41
248	3.83	33.64	3.16	26.74	300	3.85	33.77	2.31	26.85	124	0.47
298	3.85	33.77	2.33	26.85	400	3.69	33.96	1.37	27.01	109	0.59
					500	3.54	34.07	0.90	27.11	100	0.69
386	3.71	33.95	1.44	27.00	600	3.39	34.18	0.63	27.22	90	0.79
485	3.56	34.05	0.94	27.10	700	3.24	34.26	0.45	27.29	84	0.88
684	3.26	34.25	0.47	27.28	800	3.09	34.32	0.36	27.36	78	0.96
1030	2.76	34.38	0.47	27.43	1000	2.80	34.38	0.43	27.43	72	1.11

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m
25	TORDENSKJOLD; June 25, 1959; 0050 GCT; 56°30'N, 175°34'W; wind, 290°, 3 kt; weather, cloudy; sea, moderate.											
	0	7.5	32.54		25.44	0	7.5	32.54		25.44	255	0.00
	10	6.52	32.65		25.66	10	6.52	32.65		25.66	234	0.02
	20	5.44	32.65		25.79	20	5.44	32.65		25.79	222	0.05
	30	5.37	32.65		25.80	30	5.37	32.65		25.80	221	0.07
	50	4.97	32.87		26.01	50	4.97	32.87		26.01	201	0.11
	75	3.82	32.94		26.19	75	3.82	32.94		26.19	184	0.16
	99	3.84	33.05		26.28	100	3.84	33.05		26.28	176	0.20
	124	3.74	33.14		26.36	150	3.56	33.17		26.40	165	0.29
	148	3.59	-			200	3.06	33.22		26.48	157	0.37
	197	3.08	33.22		26.48							
	246	3.06	33.31		26.55							
26	TORDENSKJOLD; June 25, 1959; 0657, 0823 GCT; 57°00'N, 175°00'W; wind, 290°, 3 kt; weather, overcast; sea, moderate.											
	0	6.7	32.80	-	25.75	0	6.7	32.80		25.75	225	0.00
	10	6.60	32.79	7.59	25.75	10	6.60	32.79	7.59	25.75	225	0.02
	20	5.64	32.84	7.53	25.91	20	5.64	32.84	7.53	25.91	210	0.04
	30	5.46	32.89	7.46	25.97	30	5.46	32.89	7.46	25.97	204	0.07
	50	4.12	32.86	7.09	26.10	50	4.12	32.86	7.09	26.10	193	0.11
	74	3.98	33.00	6.97	26.22	75	3.98	33.01	6.94	26.23	180	0.15
	99	3.86	33.14	6.68	26.34	100	3.84	33.14	6.70	26.35	169	0.20
	123	3.44	33.14	7.00	26.38	150	3.22	33.20	6.96	26.45	159	0.28
	148	3.23	33.20	6.98	26.45	200	3.25	33.22	6.17	26.47	158	0.36
	197	3.23	33.21	6.24	26.46	250	3.55	33.31	4.79	26.51	155	0.44
	246	3.52	33.30	4.95	26.50	300	3.84	33.42	3.35	26.57	150	0.51
	295	3.84	33.40	3.39	26.55	400	3.82	33.80	2.24	26.87	122	0.65
						500	3.67	33.99	1.27	27.04	107	0.76
	376	3.85	33.73	2.61	26.81	600	3.51	34.08	0.93	27.13	99	0.86
	473	3.72	33.96	1.37	27.01	700	3.35	34.16	0.68	27.20	92	0.96
	670	3.40	34.14	0.75	27.18	800	3.20	34.23	0.54	27.27	86	1.05
	1015	2.89	34.33	0.50	27.38	1000	2.91	34.32	0.49	27.37	78	1.21
27	TORDENSKJOLD; June 26, 1959; 0003 GCT; 57°16'N, 174°21'W; wind, 250°, 10 kt; weather, cloudy; sea, moderate.											
	0	7.0	32.90		25.79	0	7.0	32.90		25.79	222	0.00
	10	6.92	32.89		25.79	10	6.92	32.89		25.79	222	0.02
	20	6.04	32.96		25.96	20	6.04	32.96		25.96	206	0.04
	30	5.82	32.96		25.99	30	5.82	32.96		25.99	203	0.06
	49	5.34	32.98		26.06	50	5.26	32.98		26.07	196	0.10
	74	3.95	33.07		26.28	75	3.94	33.07		26.28	175	0.15
	99	3.76	33.14		26.35	100	3.75	33.14		26.36	168	0.19
	123	3.60	33.19		26.41	150	3.44	33.23		26.46	159	0.27
	148	3.48	33.23		26.45	200	3.01	33.27		26.53	153	0.35
	197	2.96	33.26		26.52	250	3.64	33.38		26.56	150	0.43
	246	3.60	33.37		26.55	300	3.90	33.54		26.66	141	0.50
	320	3.90	33.61		26.71							
28	TORDENSKJOLD; June 26, 1959; 0235 GCT; 57°23'N, 173°54'W; wind, 270°, 7 kt; weather, cloudy; sea, moderate.											
	0	7.2	32.76	-	25.65	0	7.2	32.76		25.65	235	0.00
	10	6.60	32.75	7.59	25.72	10	6.60	32.75	7.59	25.72	228	0.02
	19	5.62	32.76	7.07	25.85	20	5.61	32.76	7.10	25.85	216	0.04
	29	5.48	32.76	7.31	25.87	30	5.48	32.76	7.31	25.87	214	0.07
	48	5.24	32.81	7.26	25.94	50	5.12	32.82	7.19	25.96	206	0.11
	73	4.13	32.89	6.68	26.12	75	4.10	32.89	6.68	26.12	190	0.16
	97	3.86	32.94	6.59	26.19	100	3.87	32.94	6.56	26.18	185	0.20
	122	3.83	32.99	-	26.23	150	3.62	33.12	6.29	26.35	169	0.29
	146	3.62	33.12	6.31	26.35	200	3.57	33.15	6.20	26.38	167	0.38
	196	3.59	33.15	6.18	26.38	250	3.48	33.24	6.04	26.46	159	0.46
	245	3.48	33.23	6.09	26.45	300	3.59	33.41	4.95	26.59	148	0.54
	319	3.69	33.49	4.30	26.64							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
TORDENSKJOLD; June 26, 1959; 0650 GCT; 57°44'N, 173°12'W; wind, 270°, 5 kt; weather, cloudy; sea, moderate.											29
0	6.6	32.43		25.47	0	6.6	32.43		25.47	252	0.00
10	6.36	32.42		25.49	10	6.36	32.42		25.49	250	0.02
20	5.18	32.47		25.67	20	5.18	32.47		25.67	233	0.05
30	5.34	32.58		25.74	30	5.34	32.58		25.74	226	0.07
40	5.36	32.74		25.87	50	5.49	32.75		25.86	215	0.12
50	5.49	32.75		25.86	75	3.79	32.72		26.02	200	0.17
70	3.98	32.66		25.95	100	3.24	32.81		26.14	189	0.22
90	3.38	32.81		26.13							
110	3.20	32.77		26.11							
TORDENSKJOLD; June 26, 1959; 2019 GCT; 58°22'N, 171°35'W; wind, 320°, 5 kt; weather, cloudy; sea, moderate.											30
0	6.0	32.36		25.49	0	6.0	32.36		25.49	250	0.00
10	4.66	32.38		25.66	10	4.66	32.38		25.66	234	0.02
20	4.44	32.39		25.69	20	4.44	32.39		25.69	231	0.05
30	2.16	32.36		25.87	30	2.16	32.36		25.87	214	0.07
40	1.56	32.38		25.93	50	1.58	32.38		25.93	208	0.11
50	1.58	32.38		25.93	75	1.56	32.39		25.94	208	0.16
70	1.57	32.39		25.94							
90	1.53	32.39		25.94							
TORDENSKJOLD; June 27, 1959; 0646 GCT; 59°00'N, 170°00'W; wind, 320°, 8 kt; weather, fog in patches, sea, rough.											31
0	4.6	31.72	-	25.14	0	4.6	31.72		25.14	283	0.00
10	4.58	31.72	8.34	25.15	10	4.58	31.72	8.34	25.15	283	0.03
20	2.84	31.81	8.34	25.38	20	2.84	31.81	8.34	25.38	261	0.06
30	2.46	31.83	5.11	25.43	30	2.46	31.83	5.11	25.43	256	0.08
40	-0.15	31.85	6.80	25.60	50	-0.18	31.87	5.75	25.61	238	0.13
50	-0.18	31.87	5.75	25.61							
TORDENSKJOLD; June 28, 1959; 0125 GCT; 58°30'N, 170°00'W; wind, 320°, 15 kt; weather, intermittent slight drizzle; sea, rough.											32
0	4.9	31.82		25.19	0	4.9	31.82		25.19	278	0.00
10	4.80	31.83		25.21	10	4.80	31.83		25.21	277	0.03
20	3.40	31.82		25.34	20	3.40	31.82		25.34	264	0.06
30	3.26	31.83		25.36	30	3.26	31.83		25.36	263	0.08
40	-0.12	31.93		25.66	50	-0.16	31.94		25.67	233	0.13
50	-0.16	31.94		25.67							
TORDENSKJOLD; June 28, 1959; 0655 GCT; 58°00'N, 170°00'W; wind, 320°, 12 kt; weather, fog in patches; sea, rough.											33
0	5.0	31.83	-	25.19	0	5.0	31.83		25.19	279	0.00
10	4.91	31.84	8.11	25.21	10	4.91	31.84	8.11	25.21	277	0.03
20	3.71	31.96	7.25	25.42	20	3.71	31.96	7.25	25.42	257	0.06
30	0.95	31.92	7.71	25.60	30	0.95	31.92	7.71	25.60	240	0.08
40	0.90	31.93	7.53	25.61	50	0.88	31.97	6.99	25.64	236	0.13
50	0.88	31.97	6.99	25.64							
TORDENSKJOLD; June 29, 1959; 0120 GCT; 57°30'N, 170°04'W; wind, 320°, 10 kt; weather, overcast; sea, rough.											34
0	5.5	31.93		25.21	0	5.5	31.93		25.21	276	0.00
10	5.31	31.95		25.25	10	5.31	31.95		25.25	273	0.03
20	4.38	32.04		25.42	20	4.38	32.04		25.42	257	0.05
30	2.76	32.05		25.58	30	2.76	32.05		25.58	242	0.08
40	1.88	32.07		25.66	50	1.87	32.08		25.67	233	0.13
50	1.87	32.08		25.67							

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
35	TORDENSKJOLD; June 29, 1959; 0700 GCT; 56°56'N, 170°06'W; wind, 270°, 5 kt; weather, fog; sea, moderate.											
	0	4.0	31.95	-	25.39	0	4.0	31.95		25.39	260	0.00
	10	3.95	32.00	8.68	25.43	10	3.95	32.00	8.68	25.43	256	0.03
	20	3.96	32.12	8.77	25.53	20	3.96	32.12	8.77	25.53	247	0.05
	30	3.57	32.15	7.76	25.59	30	3.57	32.15	7.76	25.59	241	0.08
	40	3.52	32.16	7.60	25.60	50	3.50	32.16	7.31	25.60	240	0.12
	50	3.50	32.16	7.31	25.60							
36	TORDENSKJOLD; June 30, 1959; 0035 GCT; 56°29'N, 170°03'W; wind, 360°, 7 kt; weather, overcast; sea, slight.											
	0	4.6	32.12	-	25.46	0	4.6	32.12		25.46	253	0.00
	10	4.37	32.10	8.80	25.47	10	4.37	32.10	8.80	25.47	252	0.02
	20	3.98	32.11	8.04	25.52	20	3.98	32.11	8.04	25.52	248	0.05
	30	3.84	32.13	6.70	25.54	30	3.84	32.13	6.70	25.54	245	0.08
	50	3.38	32.24	5.10	25.67	50	3.38	32.24	5.10	25.67	233	0.12
	75	3.26	32.18	7.07	25.64	75	3.26	32.18	7.07	25.64	236	0.18
	100	2.70	32.32	6.31	25.80	100	2.70	32.32	6.31	25.80	221	0.24
37	TORDENSKJOLD; June 30, 1959; 0631 GCT; 55°59'N, 170°00'W; wind, 280°, 7 kt; weather, overcast; sea, slight.											
	0	6.8	32.08	-	25.17	0	6.8	32.08		25.17	280	0.00
	10	6.64	-	7.56		10	6.64	32.21	7.56	25.29	269	0.03
	19	6.42	32.29	7.87	25.38	20	6.31	32.31	7.80	25.41	258	0.05
	29	5.40	32.43	7.18	25.62	30	5.30	32.44	7.13	25.64	236	0.08
	48	3.92	32.60	6.61	25.91	50	3.87	32.61	6.60	25.92	209	0.12
	72	3.54	32.73	6.46	26.05	75	3.53	32.75	6.45	26.07	196	0.17
	96	3.55	32.89	-	26.18	100	3.58	32.92	6.28	26.20	184	0.22
	120	3.72	33.05	6.18	26.29	150	3.74	33.14	6.40	26.36	169	0.31
	144	3.80	33.13	6.36	26.34	200	3.51	33.23	5.89	26.45	160	0.39
	192	3.50	33.22	6.13	26.44	250	3.60	33.37	4.57	26.55	151	0.47
	241	3.58	33.34	4.79	26.53	300	3.70	33.61	3.51	26.73	134	0.54
	314	3.73	33.69	3.25	26.79							
38	TORDENSKJOLD; July 1, 1959; 0133 GCT; 55°30'N, 170°10'W; wind, 320°, 20 kt; weather, overcast; sea, rough.											
	0	6.9	32.95		25.84	0	6.9	32.95		25.84	217	0.00
	10	6.88	32.93		25.83	10	6.88	32.93		25.83	218	0.02
	20	6.89	32.92		25.82	20	6.89	32.92		25.82	219	0.04
	30	6.61	32.94		25.87	30	6.61	32.94		25.87	214	0.07
	50	5.54	33.02		26.07	50	5.54	33.02		26.07	196	0.11
	75	4.52	33.07		26.22	75	4.52	33.07		26.22	181	0.15
	99	3.91	33.17		26.36	100	3.91	33.17		26.36	168	0.20
	124	3.82	33.23		26.42	150	3.59	33.26		26.47	158	0.28
	148	3.64	33.26		26.46	200	3.10	33.29		26.54	152	0.36
	198	3.06	33.28		26.53	250	3.77	33.49		26.63	144	0.43
	247	3.74	33.48		26.63	300	3.92	33.63		26.73	135	0.50
	321	3.84	33.67		26.77							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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TORDENSKJOLD; July 1, 1959; 0737, 0830 GCT; 55°01'N, 170°03'W; wind, 320°, 15 kt; weather, overcast; sea, moderate.

0	7.2	32.56	-	25.49	0	7.2	32.56		25.49	250	0.00
10	7.20	32.56	7.09	25.49	10	7.20	32.56	7.09	25.49	250	0.02
20	5.62	32.62	7.62	25.74	20	5.62	32.62	7.62	25.74	226	0.05
30	5.30	32.65	7.54	25.80	30	5.30	32.65	7.54	25.80	221	0.07
50	3.50	32.68	7.10	26.01	50	3.50	32.68	7.10	26.01	201	0.11
75	3.33	32.73	7.03	26.07	75	3.33	32.73	7.03	26.07	195	0.16
100	3.41	32.83	6.62	26.14	100	3.41	32.83	6.62	26.14	189	0.21
125	3.62	32.89	6.47	26.17	150	3.82	32.97	6.25	26.21	182	0.30
150	3.82	32.97	6.25	26.21	200	3.88	33.13	5.76	26.33	171	0.39
200	3.88	33.13	5.76	26.33	250	3.76	33.19	5.96	26.39	166	0.48
250	3.76	33.19	5.96	26.39	300	3.62	33.30	5.62	26.50	157	0.56
300	3.62	33.30	5.62	26.50	400	3.95	33.59	3.47	26.69	139	0.70
					500	3.84	33.79	2.34	26.86	124	0.84
396	3.95	33.58	3.53	26.69	600	3.67	33.96	1.55	27.01	110	0.95
496	3.85	33.78	2.37	26.85	700	3.51	34.10	0.95	27.14	98	1.06
694	3.52	34.09	0.99	27.13	800	3.36	34.20	0.57	27.24	90	1.15
1040	3.03	34.31	0.50	27.35	1000	3.08	34.31	0.44	27.35	80	1.32

40

TORDENSKJOLD; July 2, 1959; 0052 GCT; 54°30'N, 170°00'W; wind, 320°, 5 kt; weather, overcast; sea, slight.

0	7.4	32.67		25.55	0	7.4	32.67	25.55	244	0.00
10	7.25	32.66		25.57	10	7.25	32.66	25.57	243	0.02
20	7.14	32.67		25.59	20	7.14	32.67	25.59	241	0.05
28	6.16	32.67		25.72	30	6.02	32.69	25.75	226	0.07
48	4.90	32.80		25.97	50	4.76	32.81	25.99	203	0.11
72	3.74	32.88		26.15	75	3.74	32.89	26.16	187	0.16
96	3.75	32.94		26.20	100	3.75	32.96	26.21	182	0.21
120	3.77	33.04		26.27	150	3.82	33.12	26.33	171	0.30
144	3.85	33.11		26.32	200	3.63	33.19	26.41	164	0.38
192	3.67	33.18		26.39	250	3.57	33.27	26.48	158	0.46
240	3.56	33.25		26.46	300	3.82	33.42	26.57	150	0.54
314	3.94	33.47		26.60						

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TORDENSKJOLD; July 2, 1959; 0550, 0640 GCT; 53°58'N, 170°01'W; wind, 320°, 3 kt; weather, distant fog higher than observer; sea, moderate.

0	7.3	32.81	-	25.68	0	7.3	32.81		25.68	232	0.00
10	5.17	32.95	6.08	26.06	10	5.17	32.95	6.08	26.06	196	0.02
20	4.94	33.00	5.86	26.12	20	4.94	33.00	5.86	26.12	190	0.04
30	4.90	33.05	5.67	26.16	30	4.90	33.05	5.67	26.16	186	0.06
50	4.51	33.15	4.80	26.29	50	4.51	33.15	4.80	26.29	175	0.10
75	3.94	33.19	5.16	26.38	75	3.94	33.19	5.16	26.38	166	0.14
99	3.75	33.25	5.60	26.44	100	3.77	33.25	5.56	26.44	160	0.18
124	4.04	33.34	4.63	26.49	150	4.10	33.41	4.16	26.53	152	0.26
149	4.10	33.41	4.17	26.53	200	3.99	33.50	3.63	26.62	144	0.33
198	3.99	33.50	3.62	26.62	250	3.93	33.57	3.57	26.68	139	0.40
247	3.94	33.57	3.61	26.68	300	3.85	33.64	3.08	26.74	133	0.47
296	3.85	33.64	3.08	26.74	400	3.81	33.79	2.50	26.87	122	0.60
					500	3.68	33.97	1.37	27.02	108	0.71
386	3.82	33.76	2.72	26.84	600	3.48	34.07	1.06	27.12	100	0.82
482	3.72	33.95	1.43	27.00	700	3.31	34.16	0.82	27.21	92	0.91
680	3.34	34.14	0.86	27.19	800	3.15	34.23	0.65	27.28	86	1.00
1027	2.86	34.35	0.55	27.40	1000	2.89	34.34	0.54	27.39	76	1.16

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
42	TORDENSKJOLD; July 3, 1959; 0610, 0640 GCT; 53°18'N, 170°00'W; wind, 290°, 8 kt; weather, distant fog higher than observer; sea, moderate.											
	0	7.6	32.97	-	25.76	0	7.6	32.97		25.76	224	0.00
	10	7.60	32.97	7.10	25.76	10	7.60	32.97	7.10	25.76	224	0.02
	20	6.79	32.95	7.24	25.86	20	6.79	32.95	7.24	25.86	216	0.04
	30	6.08	32.99	7.24	25.98	30	6.08	32.99	7.24	25.98	204	0.06
	50	5.10	33.06	6.65	26.15	50	5.10	33.06	6.65	26.15	188	0.10
	75	4.64	33.20	5.33	26.31	75	4.64	33.20	5.33	26.31	173	0.15
	100	4.35	33.26	5.10	26.39	100	4.35	33.26	5.10	26.39	165	0.19
	125	4.08	33.28	5.34	26.43	150	3.98	33.35	5.15	26.50	155	0.27
	150	3.98	33.35	5.15	26.50	200	3.74	33.42	4.61	26.58	148	0.35
	200	3.74	33.42	4.61	26.58	250	3.90	33.59	3.60	26.70	137	0.42
	250	3.90	33.59	3.60	26.70	300	3.82	33.65	3.02	26.75	132	0.48
	300	3.82	33.65	3.02	26.75	400	3.80	33.82	2.44	26.89	120	0.61
						500	3.62	33.99	1.50	27.04	106	0.72
	394	3.81	33.81	2.51	26.88	600	3.42	34.12	1.11	27.17	95	0.82
	492	3.64	33.98	1.53	27.03	700	3.24	34.23	0.82	27.27	86	0.92
	690	3.26	34.22	0.84	27.26	800	3.09	34.30	0.60	27.34	80	1.00
	1034	2.84	34.37	0.49	27.42	1000	2.87	34.37	0.48	27.42	74	1.15
43	TORDENSKJOLD; July 3, 1959; 0342 GCT; 53°10'N, 169°57'W; wind, 290°, 18 kt; weather, overcast; sea, rough.											
	0	6.1	32.86	-	25.87	0	6.1	32.86		25.87	214	0.00
	10	5.76	33.08	5.95	26.09	10	5.76	33.08	5.95	26.09	193	0.02
	20	5.49	33.13	5.59	26.16	20	5.49	33.13	5.59	26.16	187	0.04
	29	5.44	33.13	5.53	26.17	30	5.40	33.14	5.49	26.18	185	0.06
	48	4.82	33.25	5.00	26.33	50	4.77	33.25	5.05	26.34	170	0.09
	73	4.40	33.26	5.36	26.38	75	4.42	33.26	5.34	26.38	166	0.14
	98	4.43	33.27	5.10	26.39	100	4.38	33.28	5.10	26.40	164	0.18
	122	4.10	33.33	4.93	26.47	150	4.24	33.40	4.33	26.51	154	0.26
	147	4.26	33.38	4.45	26.49	200	3.90	33.72	2.87	26.80	127	0.33
	196	3.92	33.70	2.93	26.78	250	3.71	33.86	2.21	26.93	115	0.39
	246	3.72	33.85	2.24	26.92	300	3.64	33.90	1.92	26.97	112	0.44
	321	3.64	33.89	-	26.96							
44	TORDENSKJOLD; July 4, 1959; 0514 GCT; 52°21'N, 169°53'W; wind, 270°, 15 kt; weather, overcast; sea, rough.											
	0	7.8	32.36	-	25.25	0	7.8	32.36		25.25	272	0.00
	8	7.43	32.35	7.03	25.30	10	7.57	32.34	6.94	25.27	271	0.03
	17	7.16	32.35	6.60	25.33	20	6.26	32.38	6.40	25.48	252	0.05
	24	-	32.42	6.18		30	5.15	32.48	6.00	25.69	232	0.08
	38	4.94	32.56	5.86	25.77	50	4.81	32.66	6.03	25.87	215	0.12
	59	4.78	32.74	5.92	25.93	75	4.90	32.87	5.23	26.02	200	0.17
	78	4.92	32.90	5.11	26.04	100	5.07	33.21	4.32	26.27	177	0.22
	97	5.07	33.18	4.37	26.25	150	4.72	33.55	2.91	26.58	148	0.30
	116	5.06	33.35	4.04	26.38	200	4.64	33.77	2.26	26.76	131	0.37
	159	4.67	33.60	2.70	26.63	250	4.51	33.89	1.75	26.87	121	0.44
	202	4.64	33.78	2.24	26.77							
	267	4.44	33.91	1.58	26.90							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m

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TORDENSKJOLD; July 4, 1959; 0751, 0828 GCT; 52°00'N, 169°53'W; wind, 270°, 20 kt; weather, overcast; sea, moderate.

0	8.7	32.61	-	25.32	0	8.7	32.61		25.32	266	0.00
10	8.68	32.61	6.75	25.32	10	8.68	32.61	6.75	25.32	266	0.03
20	8.58	32.61	6.98	25.34	20	8.58	32.61	6.98	25.34	265	0.05
30	8.08	32.63	6.90	25.43	30	8.08	32.63	6.90	25.43	257	0.08
48	6.14	32.75	7.03	25.78	50	5.95	32.76	7.03	25.81	220	0.13
73	4.37	32.91	6.79	26.11	75	4.30	32.92	6.78	26.13	190	0.18
98	3.81	33.06	6.13	26.29	100	3.84	33.09	5.92	26.31	173	0.22
123	4.05	33.34	4.30	26.48	150	4.09	33.56	3.68	26.66	141	0.30
147	4.05	33.53	3.90	26.64	200	4.35	33.92	1.42	26.91	117	0.37
196	4.39	33.92	1.43	26.91	250	4.02	33.97	1.15	26.99	110	0.42
246	4.02	33.96	1.21	26.98	300	3.99	34.03	0.65	27.04	106	0.48
295	4.00	34.03	0.67	27.04	400	3.80	34.10	0.43	27.11	99	0.58
					500	3.66	34.16	0.40	27.17	94	0.68
375	3.84	34.09	0.43	27.10	600	3.51	34.21	0.37	27.23	90	0.77
472	3.70	34.14	0.41	27.15	700	3.35	34.27	0.36	27.29	84	0.86
664	3.41	34.25	0.36	27.27	800	3.18	34.32	0.36	27.35	79	0.94
1010	2.77	34.41	0.43	27.46	1000	2.79	34.41	0.43	27.46	70	1.09

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TORDENSKJOLD; July 5, 1959; 0640, 0722 GCT; 51°00'N, 169°56'W; wind, calm; weather, overcast; sea, slight.

0	8.0	32.75	25.53	0	8.0	32.75	25.53	246	0.00
10	7.66	32.76	25.59	10	7.66	32.76	25.59	241	0.02
20	7.34	32.79	25.66	20	7.34	32.79	25.66	235	0.05
30	6.06	32.84	25.86	30	6.06	32.84	25.86	215	0.07
50	5.14	32.84	25.97	50	5.14	32.84	25.97	205	0.11
75	4.04	32.91	26.14	75	4.04	32.91	26.14	188	0.16
100	3.72	33.00	26.25	100	3.72	33.00	26.25	179	0.21
125	3.56	33.13	26.37	150	3.68	33.49	26.64	142	0.29
150	3.68	33.49	26.64	200	3.42	33.83	26.94	114	0.35
200	3.42	33.83	26.94	250	3.76	33.97	27.01	107	0.41
250	3.76	33.97	27.01	300	3.62	34.03	27.08	102	0.46
300	3.62	34.03	27.08	400	3.42	34.09	27.14	96	0.56
				500	3.37	34.17	27.21	90	0.65
386	3.42	34.08	27.13	600	3.21	34.25	27.29	83	0.74
484	3.40	34.16	27.20	700	3.05	34.31	27.35	78	0.82
682	3.08	34.30	27.34	800	2.92	34.36	27.40	74	0.89
1030	2.66	34.42	27.47	1000	2.69	34.42	27.47	68	1.04

47

TORDENSKJOLD; July 6, 1959; 0600 GCT; 51°54'N, 168°37'W; wind, 290°, 35 kt; weather, cloudy; sea, very rough.

0	8.4	32.83	25.53	0	8.4	32.83	25.53	246	0.00
9	8.32	32.73	25.47	10	8.13	32.72	25.49	250	0.02
18	6.92	32.70	25.64	20	6.78	32.71	25.67	233	0.05
28	6.12	32.75	25.78	30	5.81	32.77	25.84	217	0.07
44	4.20	32.89	26.11	50	4.00	32.91	26.15	188	0.11
68	3.62	33.01	26.26	75	3.57	33.06	26.31	173	0.16
90	3.62	33.23	26.44	100	3.88	33.44	26.58	147	0.20
113	4.08	33.65	26.73	150	4.03	33.89	26.92	115	0.26
136	4.06	33.86	26.90	200	3.96	33.96	26.99	110	0.32
182	3.98	33.95	26.98	250	3.93	34.03	27.04	105	0.37
228	3.92	33.99	27.01	300	(3.84)	(34.06)	(27.08)	(102)	(0.43)
297	3.85	34.06	27.08						

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
48	TORDENSKJOLD; July 11, 1959; 0510 GCT; 53°35'N, 165°17'W; wind, 320°, 10 kt; weather, cloudy; sea, moderate.											
	0	10.0	32.32	-	24.88	0	10.0	32.32		24.88	308	0.00
	10	9.89	32.36	6.56	24.93	10	9.89	32.36	6.56	24.93	303	0.03
	20	7.80	32.24	6.91	25.16	20	7.80	32.24	6.91	25.16	282	0.06
	30	6.53	32.28	6.66	25.36	30	6.53	32.28	6.66	25.36	262	0.09
	49	4.70	32.35	6.12	25.63	50	4.72	32.36	6.12	25.64	236	0.14
	74	4.98	32.61	5.98	25.81	75	4.98	32.63	5.95	25.82	219	0.19
	98	4.96	32.96	5.47	26.09	100	4.95	32.96	5.47	26.09	194	0.25
	123	4.96	33.04	5.28	26.15	150	5.12	33.19	4.72	26.25	179	0.34
	148	5.11	33.18	4.79	26.24	200	5.27	33.43	3.34	26.42	164	0.42
	197	5.27	33.42	3.35	26.42	250	5.21	33.63	3.10	26.59	148	0.50
	246	5.22	33.62	3.12	26.58	300	5.06	33.76	2.77	26.71	138	0.57
	321	4.96	33.80	2.60	26.75							
49	TORDENSKJOLD; July 11, 1959; 0715, 0823 GCT; 53°30'N, 165°00'W; wind, 320°, 15 kt; weather, cloudy; sea, moderate.											
	0	10.0	32.30	-	24.87	0	10.0	32.30		24.87	309	0.00
	10	10.00	32.29	6.68	24.86	10	10.00	32.29	6.68	24.86	310	0.03
	20	9.43	32.30	6.97	24.96	20	9.43	32.30	6.97	24.96	301	0.06
	30	6.16	32.64	6.88	25.69	30	6.16	32.64	6.88	25.69	231	0.09
	49	4.99	32.91	5.64	26.04	50	4.99	32.91	5.64	26.04	198	0.13
	73	5.00	32.98	5.49	26.10	75	5.00	32.99	5.47	26.11	192	0.18
	98	5.06	-	4.97		100	5.08	33.17	4.89	26.24	180	0.23
	123	5.22	33.35	4.05	26.37	150	5.25	33.55	3.38	26.52	154	0.31
	147	5.28	33.53	3.44	26.50	200	4.91	33.80	2.63	26.76	132	0.38
	196	4.92	33.79	2.67	26.75	250	4.70	33.86	2.15	26.83	126	0.45
	246	4.73	33.86	2.20	26.82	300	4.34	33.92	1.44	26.91	118	0.51
	295	4.38	33.91	1.57	26.90	400	3.97	34.07	0.54	27.07	103	0.62
						500	3.83	34.14	0.45	27.14	97	0.72
	346	4.08	34.00	0.62	27.01	600	3.70	34.19	0.39	27.19	93	0.81
	444	3.88	34.11	0.48	27.11	700	3.56	34.23	0.39	27.24	89	0.90
	640	-	34.21	0.38		800	3.38	34.27	0.40	27.29	85	0.99
	984	2.97	34.37	0.41	27.41	1000	(2.93)	(34.38)	(0.41)	(27.42)	(73)	(1.15)
50	TORDENSKJOLD; July 12, 1959; 0850, 0751 GCT; 53°00'N, 164°58'W; wind, 340°, 7 kt; weather, cloudy; sea, slight.											
	0	9.6	32.74	-	25.28	0	9.6	32.74		25.28	270	0.00
	10	9.64	32.72	6.78	25.25	10	9.64	32.72	6.78	25.25	273	0.03
	20	9.56	32.72	6.70	25.27	20	9.56	32.72	6.70	25.27	272	0.05
	30	8.80	32.73	6.93	25.40	30	8.80	32.73	6.93	25.40	260	0.08
	50	5.10	32.87	7.22	26.00	50	5.10	32.87	7.22	26.00	202	0.13
	74	3.72	32.82	6.53	26.10	75	3.70	32.83	6.56	26.11	191	0.17
	98	3.46	33.16	6.01	26.40	100	3.50	33.21	5.69	26.43	161	0.22
	123	3.86	33.66	2.71	26.76	150	4.04	33.88	0.93	26.91	116	0.29
	148	4.04	33.88	0.96	26.91	200	3.97	33.96	0.41	26.98	110	0.34
	197	3.98	33.96	0.43	26.98	250	3.90	34.02	0.27	27.04	105	0.40
	247	3.90	34.02	0.27	27.04	300	3.86	34.07	0.36	27.08	101	0.45
	296	3.86	34.07	0.35	27.08	400	3.69	34.16	0.38	27.17	94	0.55
						500	3.47	34.23	0.26	27.25	87	0.64
	384	3.73	34.15	0.43	27.16	600	3.32	34.28	0.32	27.30	82	0.72
	480	3.50	34.22	0.25	27.24	700	3.17	34.32	0.38	27.35	78	0.80
	672	3.21	34.31	0.37	27.34	800	3.01	34.36	0.43	27.40	74	0.88
	1015	2.68	34.42	0.47	27.47	1000	2.70	34.42	0.47	27.47	68	1.02

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
TORDENSKJOLD; July 13, 1959; 0245 GCT; 52°25'N, 165°06'W; wind, 270°, 15 kt; weather, cloudy; sea, moderate.											51
0	9.4	32.68		25.26	0	9.4	32.68		25.26	272	0.00
10	9.25	32.67		25.28	10	9.25	32.67		25.28	270	0.03
19	8.96	32.68		25.33	20	8.88	32.68		25.34	264	0.05
28	8.10	32.72		25.49	30	7.71	32.73		25.56	244	0.08
46	5.22	32.82		25.95	50	4.85	32.83		26.00	202	0.12
70	3.61	32.95		26.22	75	3.53	33.00		26.27	177	0.17
94	3.48	33.22		26.44	100	3.62	33.31		26.50	154	0.21
117	3.91	33.55		26.67	150	4.05	33.88		26.91	116	0.28
140	4.09	33.86		26.89	200	3.94	33.97		27.00	109	0.34
188	3.95	33.95		26.98	250	3.88	34.04		27.06	103	0.39
236	3.90	34.03		27.05	300	3.79	34.05		27.07	102	0.44
307	3.78	34.05		27.08							
TORDENSKJOLD; July 13, 1959; 0750, 0845 GCT; 52°00'N, 165°00'W; wind, 250°, 25 kt; weather, overcast; sea, very rough.											52
0	8.8	32.74	-	25.40	0	8.8	32.74		25.40	258	0.00
9	8.74	32.73	4.60	25.40	10	8.80	32.73	4.69	25.40	259	0.03
18	8.64	32.71	5.10	25.40	20	8.23	32.72	4.98	25.47	252	0.05
28	6.77	32.75	4.88	25.70	30	6.48	32.76	5.15	25.75	226	0.08
46	4.68	32.84	6.66	26.02	50	4.50	32.84	6.81	26.04	198	0.12
70	3.80	32.89	6.84	26.15	75	3.62	32.90	6.57	26.18	185	0.17
94	3.33	33.09	5.43	26.36	100	3.48	33.29	5.04	26.50	155	0.21
118	3.83	33.71	3.68	26.80	150	4.05	33.86	1.29	26.90	118	0.28
142	4.07	33.84	1.47	26.88	200	3.92	33.98	0.57	27.01	108	0.33
191	3.94	33.96	0.64	26.99	250	3.84	34.04	0.38	27.06	103	0.38
240	3.85	34.03	0.38	27.05	300	3.79	34.08	0.39	27.10	100	0.44
289	3.80	34.07	0.38	27.09	400	3.61	34.17	0.43	27.19	92	0.53
					500	3.45	34.23	0.43	27.25	87	0.62
352	3.73	34.14	0.43	27.15	600	3.31	34.28	0.43	27.30	82	0.70
440	3.53	34.19	0.43	27.21	700	3.17	34.33	0.44	27.36	78	0.78
620	3.28	34.29	0.43	27.31	800	3.02	34.36	0.45	27.39	75	0.86
950	2.80	34.40	0.49	27.45							
TORDENSKJOLD; July 14, 1959; 0646 GCT; 51°03'N, 164°56'W; wind, 240°, 35 kt; weather, sky obscured; sea, very rough.											53
0	8.6	32.80		25.48	0	8.6	32.80		25.48	251	0.00
10	8.57	32.82		25.50	10	8.57	32.82		25.50	249	0.02
20	8.64	32.83		25.50	20	8.64	32.83		25.50	250	0.05
30	8.62	32.84		25.51	30	8.62	32.84		25.51	249	0.08
50	4.86	32.87		26.03	50	4.86	32.87		26.03	200	0.12
74	3.34	32.98		26.27	75	3.31	32.98		26.27	176	0.17
98	3.09	33.10		26.38	100	3.14	33.13		26.40	164	0.21
122	3.64	33.48		26.64	150	4.13	33.93		26.94	113	0.28
147	4.10	33.90		26.92							
196	3.94	33.98		27.00							
TORDENSKJOLD; July 15, 1959; 0216 GCT; 50°25'N, 164°55'W; wind, 230°, 20 kt; weather, sky obscured; sea, very rough.											54
0	8.6	32.76		25.45	0	8.6	32.76		25.45	254	0.00
10	8.51	32.79		25.49	10	8.51	32.79		25.49	251	0.02
20	8.48	32.76		25.47	20	8.48	32.76		25.47	252	0.05
30	-	32.83			30	8.45	32.83		25.53	247	0.08
49	4.68	32.85		26.03	50	4.63	32.85		26.04	199	0.12
74	3.66	32.89		26.17	75	3.62	32.89		26.17	186	0.17
98	3.16	32.98		26.28	100	3.19	33.01		26.30	173	0.21
122	3.54	33.35		26.54	150	3.86	33.74		26.82	125	0.29
146	3.88	33.72		26.80	200	3.74	33.88		26.94	114	0.35
196	3.74	33.88		26.94	250	3.72	33.95		27.00	108	0.40
245	3.72	33.94		26.99	300	3.73	34.07		27.10	100	0.46
319	3.74	34.13		27.14							

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
55	TORDENSKJOLD; July 15, 1959; 0651, 0734 GCT; 50°02'N, 165°00'W; wind, 270°, 20 kt; weather, sky obscured; sea, rough.											
	0	8.5	32.75	-	25.46	0	8.5	32.75		25.46	253	0.00
	10	8.47	32.82	6.78	25.52	10	8.47	32.82	6.78	25.52	248	0.02
	20	8.52	32.78	6.60	25.48	20	8.52	32.78	6.60	25.48	252	0.05
	30	6.15	32.80	7.07	25.82	30	6.15	32.80	7.07	25.82	219	0.07
	50	4.82	32.86	7.10	26.02	50	4.82	32.86	7.10	26.02	200	0.12
	75	4.21	32.86	7.26	26.09	75	4.21	32.86	7.26	26.09	194	0.16
	100	3.68	32.88	7.20	26.16	100	3.68	32.88	7.20	26.16	187	0.21
	125	3.56	33.03	6.33	26.29	150	3.60	33.54	3.72	26.69	137	0.29
	149	3.60	33.53	3.75	26.68	200	3.46	33.78	2.43	26.89	118	0.36
	199	3.46	33.78	2.44	26.89	250	3.48	33.85	1.72	26.95	114	0.42
	249	3.48	33.85	1.74	26.95	300	3.50	33.93	1.25	27.01	108	0.47
	298	3.50	33.93	1.28	27.01	400	3.56	34.11	0.72	27.14	96	0.57
						500	3.43	34.18	0.65	27.21	90	0.67
	366	3.58	34.07	0.76	27.11	600	3.28	34.23	0.62	27.27	86	0.75
	460	3.50	34.16	0.66	27.19	700	3.08	34.30	0.59	27.34	79	0.84
	651	3.20	34.26	0.60	27.30	800	2.88	34.36	0.59	27.41	73	0.91
	996	2.73	34.41	0.58	27.46	1000	(2.73)	(34.41)	(0.58)	(27.46)	(69)	(1.05)
56	TORDENSKJOLD; July 16, 1959; 0246 GCT; 49°30'N, 165°00'W; wind, 320°, 15 kt; weather, cloudy; sea, rough.											
	0	9.0	32.82		25.43	0	9.0	32.82		25.43	255	0.00
	10	8.87	32.78		25.42	10	8.87	32.78		25.42	257	0.03
	20	8.78	32.79		25.45	20	8.78	32.79		25.45	255	0.05
	30	7.39	32.82		25.67	30	7.39	32.82		25.67	233	0.08
	50	5.38	32.85		25.95	50	5.38	32.85		25.95	207	0.12
	75	4.68	32.86		26.04	75	4.68	32.86		26.04	199	0.17
	100	3.87	32.87		26.13	100	3.87	32.87		26.13	190	0.22
	125	3.66	32.89		26.17	150	3.60	33.08		26.32	172	0.31
	150	3.60	33.08		26.32	200	3.34	33.68		26.82	125	0.38
	200	3.34	33.68		26.82	250	3.33	33.81		26.93	115	0.44
	250	3.33	33.81		26.93	300	3.39	33.89		26.99	110	0.50
	325	3.44	33.92		27.01							
57	TORDENSKJOLD; July 16, 1959; 0716, 0802 GCT; 49°00'N, 165°00'W; wind, 340°, 10 kt; weather, cloudy; sea, moderate.											
	0	9.1	32.80	-	25.40	0	9.1	32.80		25.40	258	0.00
	10	9.02	32.80	6.59	25.42	10	9.02	32.80	6.59	25.42	257	0.03
	20	8.74	32.80	6.54	25.46	20	8.74	32.80	6.54	25.46	253	0.05
	30	8.10	32.81	6.91	25.56	30	8.10	32.81	6.91	25.56	244	0.08
	50	6.02	32.87	6.96	25.89	50	6.02	32.87	6.96	25.89	212	0.12
	75	5.08	32.88	6.97	26.01	75	5.08	32.88	6.97	26.01	201	0.18
	100	4.21	32.89	6.65	26.11	100	4.21	32.89	6.65	26.11	192	0.22
	125	4.00	32.93	7.19	26.16	150	3.90	33.20	6.14	26.39	166	0.31
	150	3.90	33.20	6.14	26.39	200	3.30	33.71	3.23	26.85	122	0.38
	200	3.30	33.71	3.23	26.85	250	3.25	33.81	2.99	26.94	114	0.44
	250	3.25	33.81	2.99	26.94	300	3.34	33.88	1.69	26.98	110	0.50
	300	3.34	33.88	1.69	26.98	400	3.59	34.04	1.24	27.09	102	0.61
						500	3.49	34.10	1.00	27.14	97	0.70
	386	3.60	34.03	1.29	27.08	600	3.35	34.18	0.83	27.22	90	0.80
	485	3.51	34.09	1.03	27.13	700	3.22	34.24	0.69	27.28	85	0.89
	683	3.24	34.23	0.72	27.27	800	3.08	34.30	0.63	27.34	80	0.97
	1030	2.76	34.40	0.64	27.45	1000	2.80	34.39	0.62	27.44	71	1.12

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ cl/ton	ΔD dyn m
TORDENSKJOLD; July 17, 1959; 0142 GCT; 48°30'N, 165°00'W; wind, 340°, 2 kt; weather, cloudy; sea, slight.											58
0	10.0	32.84		25.29	0	10.0	32.84		25.29	269	0.00
10	9.36	32.80		25.36	10	9.36	32.80		25.36	262	0.03
20	9.04	32.81		25.42	20	9.04	32.81		25.42	257	0.05
30	8.84	32.80		25.44	30	8.84	32.80		25.44	255	0.08
50	6.00	32.86		25.89	50	6.00	32.86		25.89	213	0.13
74	4.88	32.92		26.06	75	4.86	32.92		26.07	196	0.18
98	4.48	32.98		26.15	100	4.49	32.97		26.15	189	0.22
123	4.44	33.03		26.20	150	3.92	33.44		26.58	148	0.31
147	3.94	33.42		26.56	200	3.69	33.73		26.83	124	0.38
196	3.70	33.72		26.82	250	3.55	33.82		26.92	117	0.44
246	3.56	33.81		26.91	300	3.43	33.87		26.97	112	0.49
320	3.39	33.89		26.99							
TORDENSKJOLD; July 17, 1959; 0730, 0817 GCT; 48°01'N, 165°05'W; wind, 110°, 4 kt; weather, cloudy; sea, slight.											59
0	9.7	32.85	-	25.35	0	9.7	32.85		25.35	264	0.00
10	9.35	32.82	6.69	25.38	10	9.35	32.82	6.69	25.38	261	0.03
20	9.28	32.82	6.54	25.39	20	9.28	32.82	6.54	25.39	260	0.05
30	8.98	32.82	6.78	25.44	30	8.98	32.82	6.78	25.44	256	0.08
50	6.42	32.92	7.04	25.88	50	6.42	32.92	7.04	25.88	214	0.12
75	5.45	32.94	-	26.02	75	5.45	32.94		26.02	201	0.18
100	4.60	32.95	7.01	26.12	100	4.60	32.95	7.01	26.12	191	0.23
125	4.52	33.03	6.84	26.19	150	4.81	33.57	5.45	26.59	147	0.31
150	4.81	33.57	5.45	26.59	200	4.46	33.77	4.17	26.78	129	0.38
200	4.46	33.77	4.17	26.78	250	3.95	33.81	3.34	26.87	121	0.44
250	3.95	33.81	3.34	26.87	300	3.74	33.87	2.77	26.94	115	0.50
300	3.74	33.87	2.77	26.94	400	3.69	34.02	1.65	27.06	104	0.61
					500	3.59	34.11	1.22	27.14	97	0.71
384	3.70	34.00	1.72	27.04	600	3.44	34.19	0.96	27.22	90	0.81
482	3.62	34.10	1.28	27.13	700	3.29	34.25	0.77	27.28	85	0.90
678	3.32	34.24	0.81	27.27	800	3.13	34.31	0.66	27.34	80	0.98
1025	2.79	34.39	0.69	27.44	1000	2.83	34.38	0.67	27.43	72	1.13
TORDENSKJOLD; July 18, 1959; 0330 GCT; 47°47'N, 164°02'W; wind, 090°, 10 kt; weather, partly cloudy; sea, slight.											60
0	10.4	32.86		25.24	0	10.4	32.86		25.24	274	0.00
10	9.90	32.75		25.24	10	9.90	32.75		25.24	274	0.03
20	9.24	32.75		25.34	20	9.24	32.75		25.34	264	0.05
30	8.81	32.78		25.43	30	8.81	32.78		25.43	256	0.08
50	5.73	32.87		25.93	50	5.73	32.87		25.93	209	0.13
75	4.49	32.90		26.09	75	4.49	32.90		26.09	194	0.18
100	4.22	32.91		26.13	100	4.22	32.91		26.13	190	0.22
125	4.02	32.92		26.15	150	3.74	32.93		26.19	185	0.32
150	3.74	32.93		26.19	200	3.59	33.63		26.76	131	0.40
200	3.59	33.63		26.76	250	3.41	33.77		26.89	119	0.46
250	3.41	33.77		26.89	300	3.41	33.87		26.97	112	0.52
325	3.48	33.90		26.99							
TORDENSKJOLD; July 18, 1959; 0914 GCT; 47°29'N, 162°55'W; wind, calm; weather, partly cloudy; sea, slight.											61
0	10.2	32.75		25.18	0	10.2	32.75		25.18	279	0.00
10	10.18	32.74		25.18	10	10.18	32.74		25.18	280	0.03
20	9.50	32.73		25.28	20	9.50	32.73		25.28	270	0.06
30	8.28	32.74		25.48	30	8.28	32.74		25.48	251	0.08
48	6.12	32.87		25.88	50	6.04	32.88		25.90	212	0.13
74	5.08	32.94		26.06	75	5.02	32.94		26.06	196	0.18
98	4.20	32.92		26.14	100	4.20	32.91		26.13	190	0.23
122	4.29	32.99		26.18	150	4.47	33.51		26.58	148	0.31
146	4.46	33.48		26.55	200	4.33	33.79		26.81	126	0.38
196	4.37	33.78		26.80	250	3.90	33.86		26.91	117	0.44
245	3.93	33.85		26.90	300	3.70	33.89		26.96	113	0.50
319	3.69	33.90		26.97							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
62	TORDENSKJOLD; July 18, 1959; 1626 GCT; 47°09'N, 161°37'W; wind, 140°, 5 kt; weather, fog in patches; sea, slight.										
0	9.9	32.74		25.23	0	9.9	32.74		25.23	275	0.00
10	9.90	32.77		25.25	10	9.90	32.77		25.25	273	0.03
20	9.48	32.77		25.32	20	9.48	32.77		25.32	267	0.05
30	9.27	32.78		25.36	30	9.27	32.78		25.36	263	0.08
50	6.60	32.93		25.86	50	6.60	32.93		25.86	215	0.13
75	5.66	32.96		26.01	75	5.66	32.96		26.01	202	0.18
98	4.56	32.96		26.13	100	4.54	32.97		26.14	189	0.23
123	4.52	33.20		26.32	150	4.92	33.68		26.66	140	0.31
148	4.94	33.67		26.65	200	4.46	33.79		26.80	128	0.38
197	4.49	33.79		26.80	250	4.02	33.84		26.88	120	0.44
246	4.05	33.84		26.88	300	3.78	33.88		26.94	115	0.50
321	3.73	33.89		26.95							
63	TORDENSKJOLD; July 19, 1959; 0305, 0424 GCT; 47°01'N, 160°06'W; wind, 180°, 20 kt; weather, fog in patches; sea, slight.										
0	10.2	32.82	-	25.24	0	10.2	32.82		25.24	274	0.00
9	10.12	32.79	6.01	25.23	10	10.03	32.79	6.05	25.24	274	0.03
18	9.55	32.78	6.32	25.32	20	9.61	32.78	6.36	25.31	268	0.05
28	9.44	32.79	6.54	25.34	30	9.03	32.81	6.64	25.42	257	0.08
47	6.47	32.92	7.13	25.87	50	6.38	32.94	7.08	25.90	212	0.13
71	5.72	33.03	6.83	26.05	75	5.53	33.02	6.85	26.07	196	0.18
94	4.98	33.04	6.79	26.15	100	5.04	33.05	6.71	26.15	188	0.23
118	5.13	33.19	6.35	26.25	150	5.08	33.63	5.26	26.60	146	0.31
142	5.08	33.58	5.53	26.56	200	4.76	33.81	4.00	26.78	129	0.38
190	4.90	33.80	4.18	26.76	250	4.23	33.86	3.25	26.88	120	0.44
238	4.34	33.85	3.39	26.86	300	3.98	33.89	2.58	26.93	116	0.50
287	4.00	33.89	2.78	26.93	400	3.82	34.01	1.84	27.04	106	0.61
					500	3.70	34.10	1.32	27.12	99	0.71
326	3.94	33.90	2.25	26.94	600	3.56	34.17	0.94	27.19	93	0.81
417	3.80	34.03	1.75	27.06	700	3.43	34.24	0.78	27.26	87	0.90
610	3.55	34.18	0.91	27.20	800	3.26	34.29	0.69	27.32	82	0.98
953	2.95	34.37	0.63	27.41	1000	(2.84)	(34.39)	(0.63)	(27.43)	(72)	(1.14)
64	TORDENSKJOLD; July 20, 1959; 0046 GCT; 47°30'N, 160°02'W; wind, 180°, 5 kt; weather, cloudy; sea, slight.										
0	10.2	32.76		25.19	0	10.2	32.76		25.19	278	0.00
9	9.98	32.75		25.22	10	9.95	32.74		25.22	276	0.03
18	9.55	32.74		25.28	20	9.38	32.76		25.33	266	0.06
26	8.79	32.80		25.45	30	8.10	32.82		25.57	243	0.08
45	6.15	32.88		25.88	50	5.88	32.90		25.93	209	0.12
67	5.07	32.94		26.06	75	4.66	32.91		26.08	195	0.18
90	4.28	32.93		26.14	100	4.50	32.95		26.13	190	0.22
113	4.66	33.11		26.24	150	4.51	33.69		26.71	135	0.30
133	4.66	33.62		26.64	200	4.09	33.79		26.84	124	0.37
180	4.26	33.78		26.81	250	3.81	33.83		26.90	118	0.43
226	3.92	33.81		26.87							
295	3.74	33.87		26.94							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
TORDENSKJOLD; July 20, 1959; 0431, 0528 GCT; 48°00'N, 160°00'W; wind, 180°, 5 kt; weather, fog in patches; sea, slight.											65
0	10.2	32.73	-	25.17	0	10.2	32.73		25.17	281	0.00
10	10.03	32.73	6.78	25.20	10	10.03	32.73	6.78	25.20	278	0.03
20	9.66	32.73	6.91	25.26	20	9.66	32.73	6.91	25.26	272	0.06
30	9.33	32.73	6.93	25.31	30	9.33	32.73	6.93	25.31	268	0.08
50	6.61	32.82	7.01	25.78	50	6.61	32.82	7.01	25.78	223	0.13
75	4.52	32.85	7.21	26.05	75	4.52	32.85	7.21	26.05	198	0.18
100	3.98	32.89	7.15	26.13	100	3.98	32.89	7.15	26.13	190	0.23
124	3.82	32.91	7.03	26.17	150	3.68	33.49	4.89	26.64	142	0.32
149	3.68	33.48	4.93	26.63	200	3.60	33.75	3.39	26.85	122	0.38
199	3.60	33.75	3.40	26.85	250	3.46	33.81	2.74	26.92	116	0.44
248	3.46	33.81	2.77	26.92	300	3.49	33.82	2.16	26.92	116	0.50
298	3.49	33.81	2.20	26.91	400	3.55	34.04	1.20	27.09	101	0.61
					500	3.52	34.14	1.11	27.17	94	0.71
384	3.54	34.02	1.21	27.08	600	3.42	34.22	0.94	27.25	88	0.80
482	3.54	34.13	1.14	27.16	700	3.29	34.28	0.76	27.31	83	0.88
676	3.32	34.27	0.81	27.30	800	3.14	34.34	0.60	27.37	77	0.96
1022	2.74	34.42	0.25	27.47	1000	2.78	34.41	0.28	27.46	70	1.11
TORDENSKJOLD; July 21, 1959; 0014 GCT; 48°30'N, 160°00'W; wind, 210°, 10 kt; weather, overcast; sea, moderate.											66
0	10.1	32.69		25.15	0	10.1	32.69		25.15	282	0.00
9	10.06	32.69		25.16	10	10.02	32.69		25.17	281	0.03
18	9.54	32.71		25.26	20	9.41	32.71		25.28	270	0.06
27	8.74	32.71		25.39	30	8.06	32.73		25.51	249	0.08
46	5.35	32.80		25.92	50	5.06	32.81		25.96	206	0.13
67	4.14	32.84		26.08	75	3.96	32.84		26.10	193	0.18
92	3.72	32.87		26.14	100	3.70	32.85		26.13	190	0.23
114	3.68	32.96		26.22	150	3.62	33.63		26.76	131	0.31
136	3.71	33.54		26.68	200	3.52	33.81		26.91	117	0.37
182	3.50	33.78		26.89	250	3.52	33.85		26.94	114	0.43
228	3.53	33.85		26.94	300	(3.52)	(33.95)		(27.02)	(107)	(0.48)
297	3.52	33.94		27.01							
TORDENSKJOLD; July 21, 1959; 0352, 0429 GCT; 49°00'N, 160°00'W; wind, 220°, 10 kt; weather, fog in patches; sea, moderate.											67
0	10.2	32.71	-	25.15	0	10.2	32.71		25.15	282	0.00
10	10.22	32.72	6.63	25.16	10	10.22	32.72	6.63	25.16	282	0.03
20	9.48	32.72	6.66	25.28	20	9.48	32.72	6.66	25.28	270	0.06
30	8.52	32.73	6.91	25.44	30	8.52	32.73	6.91	25.44	256	0.08
50	4.61	32.84	6.83	26.03	50	4.61	32.84	6.83	26.03	199	0.13
75	3.66	32.90	7.29	26.17	75	3.66	32.90	7.29	26.17	186	0.18
100	3.32	32.90	7.18	26.21	100	3.32	32.90	7.18	26.21	183	0.22
125	3.18	33.02	6.66	26.31	150	3.66	33.59	3.56	26.72	134	0.30
150	3.66	33.59	3.56	26.72	200	3.52	33.81	2.12	26.91	117	0.36
200	3.52	33.81	2.12	26.91	250	3.56	33.94	1.14	27.01	108	0.42
250	3.56	33.94	1.14	27.01	300	3.56	34.01	1.09	27.07	103	0.47
300	3.56	34.01	1.09	27.07	400	3.52	34.12	0.86	27.16	95	0.57
					500	3.40	34.20	0.69	27.23	88	0.66
370	3.57	34.08	0.96	27.12	600	3.29	34.25	0.65	27.28	84	0.75
460	3.44	34.18	0.72	27.21	700	3.19	34.31	0.65	27.34	79	0.83
654	3.22	34.28	0.64	27.31	800	3.07	34.37	0.67	27.40	74	0.91
996	2.69	34.42	0.68	27.47	1000	(2.68)	(34.42)	(0.68)	(27.47)	(68)	(1.05)

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
68	TORDENSKJOLD; July 22, 1959; 0140 GCT; 49°30'N, 160°10'W; wind, 290°, 20 kt; weather, fog in patches; sea, moderate.											
	0	9.7	32.69		25.22	0	9.7	32.69		25.22	276	0.00
	10	9.67	32.67		25.21	10	9.67	32.67		25.21	277	0.03
	20	9.55	32.69		25.25	20	9.55	32.69		25.25	274	0.06
	30	9.20	32.70		25.31	30	9.20	32.70		25.31	268	0.08
	50	5.24	32.81		25.94	50	5.24	32.81		25.94	208	0.13
	75	3.70	32.87		26.15	75	3.70	32.87		26.15	188	0.18
	99	3.54	32.89		26.18	100	3.54	32.90		26.18	185	0.23
	124	3.60	33.22		26.43	150	3.61	33.74		26.85	122	0.30
	148	3.62	33.73		26.84	200	3.51	33.85		26.94	114	0.36
	198	3.51	33.85		26.94	250	3.58	33.92		26.99	109	0.42
	247	3.58	33.92		26.99	300	3.58	33.99		27.05	104	0.47
	321	3.55	34.02		27.07							
69	TORDENSKJOLD; July 22, 1959; 0632, 0746 GCT; 49°55'N, 160°05'W; wind, 270°, 25 kt; weather, overcast; sea, rough.											
	0	9.9	32.75	-	25.24	0	9.9	32.75		25.24	274	0.00
	10	9.88	32.74	6.66	25.23	10	9.88	32.74	6.66	25.23	275	0.03
	20	9.89	32.73	6.53	25.22	20	9.89	32.73	6.53	25.22	276	0.06
	30	8.63	32.73	7.01	25.42	30	8.63	32.73	7.01	25.42	257	0.08
	50	5.10	32.83	7.26	25.97	50	5.10	32.83	7.26	25.97	205	0.13
	74	3.69	32.88	7.29	26.15	75	3.68	32.88	7.29	26.16	187	0.18
	99	3.52	32.89	7.15	26.18	100	3.51	32.88	7.20	26.17	186	0.22
	124	3.44	32.96	6.94	26.24	150	3.69	33.65	3.40	26.77	130	0.30
	148	3.70	33.64	3.48	26.76	200	3.54	33.81	1.96	26.91	117	0.36
	198	3.54	33.81	1.99	26.91	250	3.57	33.90	1.37	26.98	111	0.42
	248	3.57	33.90	1.39	26.98	300	3.57	33.97	1.00	27.03	106	0.48
	297	3.57	33.97	1.00	27.03	400	3.55	34.08	0.86	27.12	98	0.58
						500	3.48	34.16	0.74	27.19	92	0.67
	360	3.57	34.03	0.93	27.08	600	3.39	34.22	0.65	27.25	88	0.76
	454	3.52	34.13	0.78	27.16	700	3.28	34.28	0.60	27.31	83	0.85
	646	3.34	34.25	0.63	27.28	800	3.15	34.32	0.59	27.35	79	0.93
	990	2.86	34.38	0.65	27.43	1000	(2.85)	(34.38)	(0.65)	(27.43)	(72)	(1.08)
70	TORDENSKJOLD; July 23, 1959; 0254 GCT; 50°30'N, 159°55'W; wind, 320°, 20 kt; weather, cloudy; sea, rough.											
	0	10.2	32.73		25.17	0	10.2	32.73		25.17	281	0.00
	9	10.24	32.72		25.15	10	10.29	32.72		25.15	283	0.03
	18	10.08	32.75		25.21	20	9.80	32.76		25.26	272	0.06
	26	8.83	32.79		25.44	30	7.64	32.81		25.63	237	0.08
	44	4.64	32.85		26.03	50	4.31	32.86		26.08	195	0.12
	67	3.62	32.89		26.17	75	3.46	32.90		26.19	184	0.17
	90	3.28	32.96		26.26	100	3.25	33.01		26.30	174	0.22
	113	3.32	33.16		26.41	150	3.71	33.75		26.84	123	0.29
	136	3.78	33.67		26.77	200	3.62	33.89		26.96	112	0.35
	182	3.62	33.87		26.95	250	3.62	33.96		27.02	107	0.40
	228	3.62	33.93		27.00	300	3.60	34.02		27.07	102	0.46
	302	3.60	34.02		27.07							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
TORDENSKJOLD; July 23, 1959; 0752, 0837 GCT; 50°57'N, 159°55'W; wind, 290°, 25 kt; weather, fog in patches; sea, rough.											71
0	9.9	32.70	-	25.20	0	9.9	32.70		25.20	278	0.00
10	9.86	32.67	6.84	25.18	10	9.86	32.67	6.84	25.18	280	0.03
19	9.98	32.67	6.66	25.16	20	9.99	32.67	6.68	25.16	282	0.06
28	9.58	32.66	6.74	25.22	30	8.98	32.68	6.80	25.33	266	0.08
48	4.98	32.84	7.09	25.99	50	4.81	32.85	7.10	26.02	200	0.13
72	3.53	32.95	6.97	26.23	75	3.45	32.95	7.08	26.23	180	0.18
96	3.34	33.13	6.24	26.39	100	3.46	33.23	5.56	26.45	159	0.22
110	3.69	33.45	4.10	26.61	150	3.85	33.85	1.65	26.91	116	0.29
144	3.86	33.83	1.76	26.89	200	3.80	33.95	1.00	26.99	109	0.34
192	3.80	33.94	1.04	26.99	250	3.79	34.01	0.74	27.04	105	0.40
241	3.80	34.00	0.78	27.03	300	3.73	34.06	0.63	27.09	101	0.45
290	3.74	34.05	0.60	27.08	400	3.63	34.14	0.60	27.16	94	0.55
					500	3.48	34.20	0.49	27.22	89	0.64
372	3.66	34.12	0.67	27.14	600	3.31	34.27	0.53	27.30	83	0.72
468	3.54	34.18	0.48	27.20	700	3.14	34.33	0.56	27.36	77	0.80
660	3.21	34.31	0.55	27.34	800	2.99	34.38	0.58	27.41	73	0.88
1005	2.69	34.43	0.62	27.48	1000	2.70	34.43	0.62	27.48	67	1.02
TORDENSKJOLD; July 24, 1959; 0808, 0842 GCT; 51°57'N, 159°58'W; wind, 270°, 20 kt; weather, fog in patches; sea, rough.											72
0	9.8	32.66	-	25.18	0	9.8	32.66		25.18	279	0.00
10	9.77	32.65	6.72	25.18	10	9.77	32.65	6.72	25.18	280	0.03
20	9.78	32.65	6.61	25.18	20	9.78	32.65	6.61	25.18	280	0.06
30	9.36	32.65	6.79	25.24	30	9.36	32.65	6.79	25.24	274	0.08
49	4.80	32.87	7.17	26.03	50	4.75	32.87	7.06	26.04	198	0.13
74	3.85	32.93	5.25	26.18	75	3.81	32.93	5.26	26.18	185	0.18
98	3.46	33.06	4.88	26.32	100	3.55	33.12	4.72	26.36	168	0.22
123	4.22	33.62	3.16	26.69	150	4.06	33.85	2.17	26.89	119	0.30
148	4.07	33.85	2.25	26.89	200	3.86	33.93	0.90	26.97	111	0.35
197	3.88	33.93	0.90	26.97	250	3.70	33.97	0.83	27.02	107	0.41
247	3.70	33.97	0.84	27.02	300	3.70	34.03	0.66	27.07	103	0.46
296	3.70	34.02	0.67	27.06	400	3.67	34.16	0.41	27.17	93	0.56
					500	3.48	34.23		27.25	87	0.65
382	3.71	34.14	0.43	27.15	600	3.29	34.29		27.31	81	0.73
479	3.52	34.22	0.38	27.24	700	3.12	34.34		27.37	76	0.81
675	3.16	34.33	0.45	27.36	800	2.96	34.38		27.42	72	0.88
1022	2.68	34.43	-	27.48	1000	2.70	34.43		27.48	67	1.02
TORDENSKJOLD; July 25, 1959; 0316 GCT; 52°30'N, 160°00'W; wind, 250°, 20 kt; weather, fog; sea, moderate.											73
0	10.9	32.60		24.95	0	10.9	32.60		24.95	302	0.00
10	10.88	32.56		24.92	10	10.88	32.56		24.92	304	0.03
20	10.90	32.56		24.92	20	10.90	32.56		24.92	305	0.06
30	10.84	32.55		24.92	30	10.84	32.55		24.92	305	0.09
49	5.67	32.79		25.87	50	5.59	32.79		25.88	214	0.14
73	4.19	32.92		26.14	75	4.11	32.93		26.15	188	0.19
97	3.72	33.11		26.33	100	3.81	33.17		26.37	167	0.24
122	4.28	33.50		26.59	150	4.37	33.74		26.77	130	0.31
146	4.34	33.72		26.76	200	4.48	33.92		26.90	118	0.37
196	4.50	33.91		26.89	250	4.23	34.00		26.99	110	0.43
245	4.25	33.99		26.98	300	4.04	34.03		27.03	106	0.48
319	3.98	34.03		27.04							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
74	TORDENSKJOLD; July 25, 1959; 0815, 0855 GCT; 53°00'N, 160°00'W; wind, 250°, 15 kt; weather, thick drizzle; sea, moderate.										
0	9.9	32.27	-	24.86	0	9.9	32.27		24.86	310	0.00
10	9.92	32.27	6.61	24.86	10	9.92	32.27	6.61	24.86	310	0.03
20	9.86	32.27	5.89	24.87	20	9.86	32.27	5.89	24.87	310	0.06
29	7.93	32.24	5.88	25.14	30	7.76	32.25	5.95	25.17	281	0.09
48	5.50	32.39	6.61	25.58	50	5.42	32.41	6.51	25.60	240	0.14
72	4.88	32.58	5.76	25.80	75	4.89	32.59	5.86	25.80	221	0.20
96	4.97	32.75	5.67	25.92	100	5.01	32.81	5.14	25.96	206	0.26
120	5.17	33.08	3.56	26.16	150	5.32	33.39	3.83	26.39	167	0.35
144	5.31	33.36	3.93	26.36	200	5.20	33.67	2.91	26.62	145	0.43
192	5.27	33.62	3.08	26.57	250	4.79	33.86	2.03	26.82	126	0.49
240	4.87	33.85	2.18	26.80	300	4.47	33.93	1.37	26.91	118	0.56
288	4.52	33.91	1.51	26.89	400	4.17	34.03	0.67	27.02	108	0.67
					500	3.97	34.08	0.60	27.08	99	0.77
384	4.20	34.02	0.67	27.01	600	3.73	34.15	0.47	27.16	91	0.87
482	4.01	34.07	0.64	27.07	700	3.51		0.37			
676	3.56	34.21	0.39	27.22	800	3.29		0.30			
1019	2.86	-	0.27		1000	2.90		0.27			
75	TORDENSKJOLD; July 26, 1959; 0402 GCT; 53°30'N, 159°53'W; wind, 230°, 15 kt; weather, fog; sea, slight.										
0	9.9	32.28		24.87	0	9.9	32.28		24.87	309	0.00
10	9.77	32.29		24.90	10	9.77	32.29		24.90	306	0.03
20	9.77	32.28		24.89	20	9.77	32.28		24.89	308	0.06
29	9.43	32.26		24.93	30	9.18	32.28		24.98	299	0.09
48	5.92	32.63		25.71	50	5.83	32.64		25.73	228	0.14
73	5.18	32.83		25.96	75	5.18	32.83		25.96	206	0.20
97	5.22	33.22		26.26	100	5.23	33.50		26.48	157	0.24
121	5.26	-			150	5.21	33.72		26.66	141	0.32
145	5.22	33.71		26.65	200	5.00	33.82		26.76	129	0.38
194	5.03	33.81		26.75	250	4.59	33.93		26.90	116	0.44
243	4.62	33.92		26.88	300	4.38	33.97		26.95	111	0.49
315	4.33	33.99		26.97							
76	TORDENSKJOLD; July 26, 1959; 0822, 0902 GCT; 53°55'N, 159°40'W; wind, missing; weather, intermittent slight drizzle; sea, slight.										
0	10.4	32.34		24.83	0	10.4	32.34		24.83	313	0.00
10	10.29	32.37		24.87	10	10.29	32.37		24.87	309	0.03
20	10.32	32.36		24.86	20	10.32	32.36		24.86	310	0.06
30	10.15	32.41		24.93	30	10.15	32.41		24.93	304	0.09
50	5.39	32.87		25.97	50	5.39	32.87		25.97	205	0.14
75	4.48	32.96		26.14	75	4.48	32.96		26.14	189	0.19
100	4.96	33.48		26.50	100	4.96	33.48		26.50	155	0.24
125	5.12	33.61		26.58	150	5.01	33.87		26.80	127	0.31
150	5.01	33.87		26.80	200	4.59	34.00		26.95	113	0.37
199	4.59	34.00		26.95	250	4.35	33.95		26.94	115	0.42
249	4.36	33.95		26.94	300	4.01	33.97		26.99	110	0.48
298	4.01	33.97		26.99	400	3.96	34.11		27.10	100	0.58
					500	3.77	34.16		27.16	95	0.68
380	4.00	34.10		27.09	600	3.57	34.23		27.24	89	0.78
479	3.81	34.14		27.14	700	3.39	34.29		27.30	83	0.86
677	3.43	34.28		27.29	800	3.21	34.34		27.36	78	0.94
1025	2.86	34.41		27.45	1000	2.90	34.41		27.45	71	1.09

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

77

TORDENSKJOLD; July 27, 1959; 0153 GCT; 54°17'N, 160°00'W; wind, 070°, 20 kt; weather, fog; sea, rough.

0	8.9	31.99	-	24.80	0	8.9	31.99		24.80	316	0.00
10	8.76	32.06	7.12	24.88	10	8.76	32.06	7.12	24.88	308	0.03
19	8.48	32.04	7.16	24.90	20	8.42	32.04	7.07	24.91	305	0.06
28	7.91	32.10	6.47	25.03	30	7.78	32.14	6.43	25.08	289	0.09
48	6.68	32.41	6.06	25.45	50	6.54	32.42	5.99	25.47	252	0.15
71	5.47	32.53	5.53	25.69	75	5.41	32.55	5.51	25.71	230	0.21
95	5.20	32.66	5.41	25.82	100	5.18	32.67		25.83	218	0.26
119	5.18	32.75	5.31	25.90	150	5.27	33.01		26.09	194	0.36
142	5.31	32.96	-	26.05	200	5.10	33.41		26.43	163	0.45
191	5.10	33.31	-	26.35	250	4.97	33.82		26.77	132	0.53
240	5.02	33.76	-	26.71	300	4.58	33.96		26.92	117	0.59
313	4.44	33.95	-	26.93							

78

TORDENSKJOLD; September 2, 1959; 0318 GCT; 51°00'N, 138°00'W; wind, calm; weather, partly cloudy; sea, slight.

0	12.6	32.67	-	24.69	0	12.6	32.67		24.69	326	0.00
10	12.52	32.67	6.08	24.70	10	12.52	32.67	6.08	24.70	325	0.03
19	12.48	32.65	6.01	24.70	20	12.54	32.65	6.03	24.68	327	0.07
28	12.52	32.66	6.18	24.70	30	12.01	32.68	6.28	24.81	316	0.10
48	8.36	32.80	6.85	25.52	50	8.11	32.81	6.85	25.56	244	0.15
72	6.04	32.89	6.78	25.90	75	5.86	32.88	6.80	25.92	210	0.21
96	5.26	32.94	6.53	26.04	100	5.42	33.02	6.31	26.08	195	0.26
120	5.94	33.37	5.33	26.30	150	5.78	33.71	4.45	26.58	148	0.35
144	5.88	33.69	4.54	26.56	200	5.14	33.81	3.71	26.74	134	0.42
193	5.19	33.80	3.83	26.72	250	4.79	33.86	2.88	26.82	126	0.48
292	4.54	33.90	2.30	26.88	300	4.50	33.91	2.20	26.89	120	0.54
515	3.97	34.13	0.73	27.12	400	4.11	34.01	1.21	27.01	109	0.66
					500	3.97	34.11	0.75	27.10	101	0.76

79

TORDENSKJOLD; September 2, 1959; 1433 GCT; 51°00'N, 136°00'W; wind, 310°, 5 kt; weather, overcast; sea, moderate.

0	13.5	32.29	-	24.22	0	13.5	32.29		24.22	371	0.00
10	13.53	32.28	5.87	24.20	10	13.53	32.28	5.87	24.20	373	0.04
20	13.52	32.28	5.90	24.21	20	13.52	32.28	5.90	24.21	373	0.07
30	13.52	32.29	5.87	24.21	30	13.52	32.29	5.87	24.21	372	0.11
49	8.47	32.57	6.63	25.32	50	8.42	32.58	6.63	25.34	266	0.18
74	7.20	32.77	6.57	25.66	75	7.14	32.77		25.67	234	0.24
98	6.09	32.89	6.61	25.90	100	6.09	32.92		25.92	210	0.29
179	5.85	33.72	-	26.58	150	5.97	33.48		26.38	168	0.39
310	4.85	33.95	-	26.88	200	5.74	33.85		26.70	138	0.46
					250	5.40	34.02		26.87	122	0.53
					300	4.95	33.98		26.89	120	0.59

80

TORDENSKJOLD; September 3, 1959; 0041 GCT; 51°00'N, 134°00'W; wind, 260°, 18 kt; weather, rain; sea, rough.

0	13.9	32.09	-	23.98	0	13.9	32.09		23.98	394	0.00
10	13.97	32.07	5.97	23.95	10	13.97	32.07	5.97	23.95	397	0.04
20	13.85	32.04	6.29	23.96	20	13.85	32.04	6.29	23.96	397	0.08
30	10.50	32.33	6.14	24.81	30	10.50	32.33	6.14	24.81	316	0.12
50	8.65	32.52	6.19	25.25	50	8.65	32.52	6.19	25.25	273	0.18
75	7.39	32.76	6.31	25.63	75	7.39	32.76	6.31	25.63	238	0.24
100	7.22	33.08	4.74	25.90	100	7.22	33.08	4.74	25.90	212	0.30
125	6.96	33.43	4.13	26.21	150	6.66	33.67	3.68	26.44	162	0.39
150	6.66	33.67	3.68	26.44	200	6.12	33.83		26.64	144	0.46
200	6.12	33.83	3.56	26.64	250	5.66	33.89		26.74	134	0.54
300	5.28	33.95	-	26.83	300	5.28	33.95		26.83	126	0.60
525	4.44	34.10	-	27.05	400	4.73	34.04		26.97	114	0.72
					500	4.46	34.09		27.04	108	0.83

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

81 TORDENSKJOLD; September 3, 1959; 1130 GCT; 51°01'N, 131°55'W; wind, 200°, 20 kt; weather, intermittent slight drizzle; sea, rough.

0	14.0	32.24	-	24.08
10	14.10	32.21	5.94	24.03
19	14.10	-	5.89	
29	14.12	-	5.85	
48	-	-	5.91	
72	8.18	-	5.53	
96	7.61	-	5.22	
202	7.13	33.22	4.30	26.02
220	5.61	33.95	2.25	26.79

82 TORDENSKJOLD; September 3, 1959; 2152 GCT; 51°01'N, 130°05'W; wind, 210°, 15 kt; weather, partly cloudy; sea, moderate.

0	14.2	-	-	
10	14.23	-	5.94	
20	13.40	32.26	6.05	24.22
30	11.88	32.61	6.47	24.78
50	8.96	32.74	6.85	25.38

SBL

KING CRAB

Z5

TORDENSKJOLD; May 2, 1959; 1925 GCT; 54°39'N, 165°10'W; sounding, 86 m; wind, 280°, 5 kt; weather, partly cloudy; sea, calm; wire angle, 00°.

OBSERVED			COMPUTED
Z m	T °C	S ‰	σ_t g/L
0	2.36	32.09	25.63
15	2.32	32.07	25.63
30	2.29	32.09	25.64
50	2.35	32.10	25.64
80	2.44	32.25	25.76

A5

TORDENSKJOLD; May 3, 1959; 0007 GCT; 55°02'N, 165°10'W; sounding, 115 m; wind, 060°, 5 kt; weather, partly cloudy; sea, smooth; wire angle, 00°.

OBSERVED			COMPUTED
Z m	T °C	S ‰	σ_t g/L
0	2.13	-	
15	2.06	32.01	25.60
30	2.01	32.03	25.62
50	1.74	32.10	25.70
80	1.77	32.12	25.71
115	-0.80a)	32.12	25.84

A6

TORDENSKJOLD; May 3, 1959; 0420 GCT; 55°01'N, 164°38'W; sounding, 70 m; wind, 040°, 10 kt; weather, partly cloudy; sea, slight; wire angle, 00°.

Z m	T °C	S ‰	σ_t g/L
0	1.45	31.53	25.25
15	0.95	31.83	25.52
30	1.06	31.92	25.59
50	1.07a)	31.94	25.60
70	0.87	31.96	25.63

B6

TORDENSKJOLD; May 3, 1959; 1935 GCT; 55°22'N, 164°38'W; sounding, 102 m; wind, 060°, 15 kt; weather, partly cloudy; sea, choppy; wire angle, 10°.

Z m	T °C	S ‰	σ_t g/L
0	0.33	31.40	25.21
15	0.27	31.42	25.23
30	-0.60	31.42	25.27
50	1.17	32.09	25.72
80	1.19a)	32.09	25.72
100	1.18	32.09	25.72

C6

TORDENSKJOLD; May 4, 1959; 0100 GCT; 55°40'N, 164°25'W; sounding, 99 m; wind, 050°, 15 kt; weather, partly cloudy; sea, choppy; wire angle, missing.

Z m	T °C	S ‰	σ_t g/L
0	0.13	31.55	25.34
15	0.07	31.53	25.32
30	-0.88a)	31.55	25.38
50	-	32.10	
80	-	32.10	
100	0.86a)	32.10	25.75

C7

TORDENSKJOLD; May 4, 1959; 0446 GCT; 55°36'N, 164°00'W; sounding, 95 m; wind, direction missing, 15 kt; weather, partly cloudy; sea, moderate; wire angle, missing.

Z m	T °C	S ‰	σ_t g/L
0	0.03	31.38	25.21
15	-0.05	31.40	25.23
30	-0.69	31.47	25.31
50	0.87	32.03	25.69
80	0.87a)	32.09	25.74
95	0.84	32.12	25.76

B7

TORDENSKJOLD; May 4, 1959; 1925 GCT; 55°20'N, 163°55'W; sounding, 64 m; wind, 060°, 10 kt; weather, partly cloudy; sea, moderate; wire angle, missing.

Z m	T °C	S ‰	σ_t g/L
0	1.15	31.65	25.37
15	0.48	31.74	25.48
30	-	31.76	
50	0.65	31.87	25.58
60	0.63	31.87	25.58

B8

TORDENSKJOLD; May 4, 1959; 2335 GCT; 55°20'N, 163°25'W; sounding, 53 m; wind, 040°, 10 kt; weather, partly cloudy; sea, slight; wire angle, missing.

Z m	T °C	S ‰	σ_t g/L
0	0.80	31.51	25.12
15	0.43	31.49	25.28
30	0.19a)	31.49	25.29
50	-0.42a)	31.53	25.34

C8

TORDENSKJOLD; May 5, 1959; 0040 GCT; 55°38'N, 163°20'W; sounding, 78 m; wind, 040°, 20 kt; weather, overcast; sea, moderate; wire angle, missing.

Z m	T °C	S ‰	σ_t g/L
0	0.38	31.38	25.19
15	0.31	31.38	25.19
30	-0.27a)	31.49	25.31
50	-	31.96	
75	0.68	31.96	25.65

C9

TORDENSKJOLD; May 5, 1959; 1920 GCT; 55°43'N, 162°48'W; sounding, 52 m; wind, 060°, 5 kt; weather, partly cloudy; sea, slight; wire angle, missing.

Z m	T °C	S ‰	σ_t g/L
0	0.22	31.55	25.34
15	0.03	31.55	25.35
30	-0.22	31.64	25.43
50	-0.28	31.71	25.49

a) Temperature from one thermometer only (additional thermometer malfunctioned).

SBL

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OBSERVED			COMPUTED
Z	T	S	σ_t
m	°C	‰	g/L

D9

TORDENSKJOLD; May 5, 1959; 2315 GCT; 56°01'N, 162°48'W; sounding, 75 m; wind, 050°, 10 kt; weather, partly cloudy; sea,

D10 smooth; wire angle, missing.

0	0.08	31.40	25.22
15	-0.28	31.38	25.22
30	-0.39	31.42	25.26
50	-	31.98	
75	0.70	32.00	25.68

E10

TORDENSKJOLD; May 6, 1959; 1910 GCT; 56°19'N, 162°16'W; sounding, 88 m; wind, 030°, 2 kt; weather, snow; sea, calm;

E9 wire angle, missing.

0	0.47	31.60	25.37
15	0.21	31.60	25.38
30	-0.55	31.78	25.55
50	-0.42	31.82	25.59
85	0.24	31.94	25.65

E8

TORDENSKJOLD; May 7, 1959; 0315 GCT; 56°17'N, 163°25'W; sounding, 86 m; wind, 090°, 10 kt; weather, fog; sea, slight;

E12 wire angle, missing.

0	0.22	-	
15	-0.22	31.33	25.18
30	-0.81a)	31.40	25.26
50	-0.70	31.82	25.60
80	0.46	32.10	25.77

E11

TORDENSKJOLD; May 11, 1959; 0510 GCT; 56°22'N, 161°38'W; sounding, 79 m; wind, 250°, 10 kt; weather, partly cloudy;

F11 sea, slight; wire angle, missing.

0	0.12	31.74	25.50
15	0.11	31.71	25.47
30	0.10	31.71	25.47
50	0.05	31.73	25.49
78	0.07	31.73	25.49

F12

TORDENSKJOLD; May 12, 1959; 0027 GCT; 56°40'N, 160°58'W; sounding, 68 m; wind, calm; weather, partly cloudy; sea,

G12 calm; wire angle, missing.

0	1.38	31.64	25.35
15	-0.80	31.64	25.45
30	-0.82a)	31.62	25.44
50	-0.81	31.64	25.45
68	-0.81	31.62	25.44

G11

TORDENSKJOLD; May 12, 1959; 1907 GCT; 57°00'N, 161°37'W; sounding, 69 m; wind, 020°, 2 kt; weather, snow; sea,

H11 calm; wire angle, missing.

0	-0.10	31.78	25.53
15	-0.73	31.78	25.56
30	-0.78	31.78	25.56
50	-0.81	31.76	25.55
69	-0.82	31.78	25.56

OBSERVED			COMPUTED
Z	T	S	σ_t
m	°C	‰	g/L

TORDENSKJOLD; May 6, 1959; 0515 GCT; 56°03'N, 162°10'W; sounding, missing; wind, 360°, 2 kt; weather, partly cloudy; sea, smooth; wire angle, missing.

0	0.51	31.60	25.37
15	-0.01	31.62	25.41
30	-0.32	31.76	25.53
50	-0.10	31.85	25.59
75	-0.07	31.85	25.59

TORDENSKJOLD; May 6, 1959; 2315 GCT; 56°22'N, 162°50'W; sounding, 78 m; wind, calm; weather, fog; sea, calm; wire angle, missing.

0	-0.12	31.38	25.21
15	-0.50	31.40	25.25
30	-0.85	31.62	25.44
50	0.46a)	32.03	25.71
78	0.63	32.07	25.74

TORDENSKJOLD; May 10, 1959; missing GCT; 56°19'N, 161°02'W; sounding, 51 m; wind, 250°, 10 kt; weather, snow; sea, slight; wire angle, missing.

0	-0.12	31.47	25.29
15	-0.21	31.44	25.27
30	-	31.46	
50	-0.36	31.47	25.29

TORDENSKJOLD; May 11, 1959; 1945 GCT; 56°38'N, 161°37'W; sounding, 87 m; wind, 260°, 5 kt; weather, partly cloudy; sea, calm; wire angle, missing.

0	-0.28	31.60	25.40
15	-0.43	31.60	25.40
30	-0.60	31.60	25.41
50	-0.77	31.60	25.42
85	-0.87	31.64	25.45

TORDENSKJOLD; May 12, 1959; 0409 GCT; 57°00'N, 161°00'W; sounding, 69 m; wind, 360°, 3 kt; weather, partly cloudy; sea, smooth; wire angle, missing.

0	0.16	31.64	25.41
15	-0.38	31.65	25.45
30	-0.67	31.67	25.48
50	-0.75	31.69	25.49
69	-0.77	31.69	25.49

TORDENSKJOLD; May 13, 1959; 0035 GCT; 57°21'N, 161°37'W; sounding, 53 m; wind, 080°, 2 kt; weather, snow; sea, calm; wire angle, missing.

0	0.24	31.67	25.44
15	-0.38	31.83	25.59
30	-0.42	31.83	25.59
50	-0.42a)	31.85	25.61

a) Temperature from one thermometer only (additional thermometer malfunctioned).

OBSERVED			COMPUTED
Z m	T °C	S ‰	σ_t g/L

TORDENSKJOLD; May 13, 1959; 0448
GCT; 57°19'N, 162°10'W; sounding, 49 m; wind, 150°, 2 kt; weather, partly cloudy; sea, smooth; wire angle, missing.

0	-0.10	31.73	25.49
15	-0.64	31.76	25.54
30	-0.68	31.76	25.54
50	-0.70	31.76	25.54

TORDENSKJOLD; May 13, 1959; 2255
GCT; 56°40'N, 162°13'W; sounding, 71 m; wind, 140°, 20 kt; weather, light snow; sea, moderate; wire angle, missing.

0	-0.05	31.65	25.43
15	-0.10	31.65	25.43
30	-0.20a)	31.65	25.44
50	-0.57a)	31.65	25.45
70	-0.57	31.64	25.44

TORDENSKJOLD; May 14, 1959; 1923
GCT; 56°42'N, 163°28'W; sounding, 77 m; wind, 090°, 15 kt; weather, light rain; sea, moderate; wire angle, missing.

0	-0.03	31.53	25.32
15	-0.21	31.55	25.36
30	-0.21	31.56	25.37
50	-0.44	31.60	25.40
77	-0.66	31.85	25.62

TORDENSKJOLD; May 15, 1959; 0335
GCT; 56°17'N, 164°03'W; sounding, 89 m; wind, 090°, 10 kt; weather, partly cloudy; sea, slight; wire angle, missing.

0	0.45	31.40	25.21
15	0.37	31.40	25.21
30	0.26	31.42	25.25
50	0.58	32.10	25.76
85	0.56	32.10	25.76

TORDENSKJOLD; May 17, 1959; 0105
GCT; 56°00'N, 164°02'W; sounding, 91 m; wind, 280°, 7 kt; weather, fog; sea, smooth; wire angle, missing.

0	0.38	31.47	25.27
15	0.09	31.46	25.27
30	-0.45	31.47	25.30
50	-0.36a)	32.09	25.80
80	0.56	32.10	25.76
91	0.58	32.10	25.76

TORDENSKJOLD; May 17, 1959; 1945
GCT; 56°18'N, 164°40'W; sounding, 91 m; wind, 300°, 5 kt; weather, fog; sea, smooth; wire angle, missing.

0	0.90	31.49	25.25
15	0.42	31.53	25.31
30	0.20	31.51	25.31
50	0.40	32.05	25.73
80	0.47	32.07	25.75
91	0.50	32.07	25.75

OBSERVED			COMPUTED
Z m	T °C	S ‰	σ_t g/L

TORDENSKJOLD; May 13, 1959; 1900
GCT; 57°02'N, 162°10'W; sounding, 65 m; wind, 130°, 10 kt; weather, overcast; sea, smooth; wire angle, missing.

0	0.00	31.76	25.52
15	-0.68	31.78	25.56
30	-	31.78	
50	-0.84	31.80	25.58
65	-0.84	31.78	25.56

TORDENSKJOLD; May 14, 1959; 0330
GCT; 56°37'N, 162°50'W; sounding, 77 m; wind, 140°, 20 kt; weather, overcast; sea, moderate; wire angle, missing.

0	0.59	31.58	25.34
15	0.53	31.58	25.35
30	0.02	31.65	25.43
50	-0.70	31.71	25.51
77	-0.44	31.82	25.59

TORDENSKJOLD; May 14, 1959; missing
GCT; 56°40'N, 164°05'W; sounding, 77 m; wind, 090°, 15 kt; weather, snow and rain; sea, moderate; wire angle, missing.

0	-0.40	31.46	25.29
15	-0.47	31.44	25.28
30	-0.52a)	31.46	25.30
50	-1.07	31.49	25.34
77	-1.37	31.69	25.50

TORDENSKJOLD; May 16, 1959; 1940
GCT; 56°00'N, 163°25'W; sounding, 90 m; wind, 280°, 5 kt; weather, overcast; sea, slight; wire angle, missing.

0	1.00	31.36	25.15
15	0.80	31.38	25.17
30	0.57	31.40	25.20
50	0.83	32.03	25.69
80	0.94	32.03	25.69
90	0.93	32.05	25.71

TORDENSKJOLD; May 17, 1959; 0418
GCT; 56°01'N, 164°35'W; sounding, 92 m; wind, 270°, 3 kt; weather, fog; sea, calm; wire angle, missing.

0	1.08	31.62	25.35
15	0.70	31.62	25.38
30	0.56	31.64	25.39
50	1.08	32.12	25.75
80	1.08	32.12	25.75
91	1.05	32.12	25.75

TORDENSKJOLD; May 18, 1959; 0225
GCT; 56°20'N, 165°14'W; sounding, 90 m; wind, 020°, 3 kt; weather, partly cloudy; sea, calm; wire angle, missing.

0	1.00	31.56	25.31
15	0.04	31.55	25.35
30	-0.06	31.55	25.35
50	0.27	32.05	25.74
80	0.26	32.03	25.72

a) Temperature from one thermometer only (additional thermometer malfunctioned).

SBL

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	OBSERVED			COMPUTED
	Z	T	S	σ_t
	m	°C	‰	g/L

E4

TORDENSKJOLD; May 18, 1959; 0630 GCT; 56°18'N, 165°55'W; sounding, 97 m; wind, 040°, 2 kt; weather, partly cloudy; sea, calm; wire angle, missing.

D4

0	1.50	31.65	25.35
15	1.20	31.67	25.39
30	0.74	31.69	25.43
50	0.73a)	31.71	25.45
80	1.22	32.16	25.78
97	1.23	32.14	25.75

D5

TORDENSKJOLD; May 18, 1959; 2235 GCT; 56°00'N, 165°17'W; sounding, 98 m; wind, 270°, 3 kt; weather, rain; sea, smooth; wire angle, missing.

C5

0	1.46	31.65	25.35
15	0.87	31.67	25.40
30	0.51	31.67	25.43
50	0.43a)	31.71	25.46
80	1.26	32.14	25.75
97	1.22	32.12	25.75

C4

TORDENSKJOLD; May 19, 1959; 0700 GCT; 55°40'N, 165°51'W; sounding, 121 m; wind, 270°, 10 kt; weather, fog; sea, slight; wire angle, missing.

B5

0	2.00	31.65	25.32
15	1.66	31.73	25.41
30	2.28	31.87	25.47
50	1.92	31.92	25.54
80	1.74	32.18	25.76
120	2.25	32.29	25.80

B4

TORDENSKJOLD; May 20, 1959; 0040 GCT; 55°19'N, 165°50'W; sounding, 122 m; wind, 270°, 10 kt; weather, overcast; sea, slight; wire angle, missing.

A4

0	3.35	31.92	25.42
15	2.58	32.05	25.59
30	2.87	32.18	25.67
50	1.95	32.16	25.72
80	2.17	32.23	25.76
120	3.27	32.74	26.08

Z5

TORDENSKJOLD; July 3, 1959; 1953 GCT; 54°38'N, 165°11'W; sounding, 78 m; wind, 040°, 10 kt; weather, overcast; sea, smooth; wire angle, missing.

0	32.12
15	32.25
30	32.27
50	32.56
78	32.61

OBSERVED			COMPUTED
Z	T	S	σ_t
m	°C	‰	g/L

TORDENSKJOLD; May 18, 1959; 1822 GCT; 55°59'N, 165°50'W; sounding, 113 m; wind, 280°, 3 kt; weather, fog; sea, smooth; wire angle, missing.

0	1.43	31.62	25.34
15	0.82	31.60	25.35
30	0.65	31.62	25.38
50	-	31.74	
80	1.52	32.12	25.73
112	1.52	32.12	25.73

TORDENSKJOLD; May 19, 1959; 0244 GCT; 55°39'N, 165°14'W; sounding, 110 m; wind, 270°, 10 kt; weather, fog; sea, smooth; wire angle, missing.

0	1.90	31.58	25.26
15	1.49	31.60	25.31
30	0.65	31.65	25.40
50	1.18	32.14	25.76
80	1.16	32.12	25.75
110	1.14	32.14	25.76

TORDENSKJOLD; May 19, 1959; 2010 GCT; 55°20'N, 165°12'W; sounding, 110 m; wind, 270°, 10 kt; weather, fog; sea, slight; wire angle, missing.

0	2.77	31.64	25.25
15	2.56	31.98	25.53
30	2.22	32.01	25.59
50	-	32.12	
80	1.76	32.14	25.72
110	2.47	32.36	25.85

TORDENSKJOLD; May 20, 1959; 0505 GCT; 54°59'N, 165°45'W; sounding, 128 m; wind, 280°, 10 kt; weather, overcast; sea, slight; wire angle, missing.

0	3.40	32.12	25.58
15	3.34	32.10	25.57
30	3.16	32.21	25.67
50	3.36	32.34	25.75
80	3.31	32.45	25.85
128	3.55	32.90	26.18

a) Temperature from one thermometer only (additional thermometer malfunctioned).

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

CGS ST. CATHARINES; January 25, 1959; 1913 GCT;[a] 49°50'N, 145°00'W; sounding, missing; wind, 200°, 20 kt; weather, intermittent slight drizzle; sea, very rough. 101

0	5.80	32.858	6.85	1.48	30.5		25.91	0	5.80	32.86	6.85	25.91	210b)	0.00
10	5.64	32.850	6.82	1.29	30.8		25.92	10	5.64	32.85	6.82	25.92	209	0.02
20	5.63c)	32.850c)	6.72d)	-	-		(25.92)	20	5.63	32.85	6.72	25.92	209	0.04
29	5.62	32.853	6.65	1.29	30.3		25.93	30	5.62	32.85	6.66	25.93	208	0.06
48	5.63	32.864	6.90	1.25	31.2		25.93	50	5.63	32.86	6.90	25.93	208	0.10
72	5.65	32.868	6.87	1.20	35.2		25.93	75	5.63	32.91	6.75	25.97	204	0.16
97	5.47	33.178	6.07	1.73	36.5		26.20	100	5.42	33.26	5.87	26.27	176	0.21
121	5.10	33.751	4.61	2.02	54.5		26.70	125	5.04	33.76	4.54	26.71	134	0.24
145	4.75	33.781	4.19	2.09	60.9		26.76	150	4.67	33.78	4.12	26.77	128	0.28
170	4.38	33.788	3.90	2.19	65.0		26.81	175	4.33	33.79	3.80	26.81	125	0.31
195	4.15	33.805	3.44	2.23	68.0		26.84	200	4.12	33.81	3.37	26.85	121	0.34
244	3.88	33.842	2.87	2.40	77.9		26.90	250	3.87	33.85	2.78	26.91	115	0.40
293	3.77	33.913	2.23	3.08	88.2		26.97	300	3.77	33.92	2.16	26.98	109	0.46
396	3.73	34.040	1.34	3.20	101		27.07	400	3.73	34.04	1.33	27.08	99	0.57
495	3.69	34.145	0.97	3.28	113		27.16	500	3.68	34.15	0.96	27.16	92	0.67
740	3.21	34.317	0.58	3.24	131		27.34	600	3.46	34.23	0.78	27.25	83	0.76
986	2.84	34.408	0.56	3.25	143		27.45	700	3.28	34.29	0.64	27.32	76	0.85
1230	2.52	34.471	0.53	3.27	153		27.53	800	3.11	34.34	0.57	27.37	72	0.93
1250	2.50e)	34.476e)	0.53e)	-	-		(27.53)	1000	2.82	34.41	0.56	27.45	64	1.08
								1200	2.56	34.46	0.53	27.52	57	1.21

CGS ST. CATHARINES; January 28, 1959; 1915 GCT; 49°50'N, 145°00'W; sounding, missing; wind, 160°, 20 kt; weather, cloudy; sea, rough. 102

0	5.40	32.873	6.98		32.3	0.20	25.97	0	5.40	32.87	6.98	25.97	204	0.00
10	5.47	32.832	6.88		29.9	0.06	25.93	10	5.47	32.83	6.88	25.93	208	0.02
20	5.45c)	32.830c)	6.80d)		-	-	(25.93)	20	5.45	32.83	6.80	25.93	208	0.04
30	5.45c)	32.830c)	6.74d)		-	-	(25.93)	30	5.45	32.83	6.74	25.93	208	0.06
50	5.44	32.831	6.66		30.5	0.11	25.93	50	5.44	32.83	6.66	25.93	208	0.10
75	5.46	32.831	6.85		31.9	0.18	25.93	75	5.46	32.83	6.85	25.93	208	0.16
90	5.39	33.359	5.82		38.0	0.03	26.35	100	5.34	33.63	5.12	26.57	148	0.20
100	5.34	33.627	5.12		44.8	0.00	26.57	125	4.86	33.78	4.31	26.75	130	0.24
109	5.17	33.741	4.69		51.6	0.00	26.68	150	4.45	33.78	4.01	26.79	127	0.27
124	4.88c)	33.781	4.32		54.6	0.00	(26.75)	175	4.14	33.79	3.72	26.83	123	0.30
149	4.46	33.783	4.02		59.5	0.00	26.79	200	3.99	33.82	3.25	26.88	118	0.33
174	4.15	33.792	3.74		67.5	0.00	26.83	250	3.77	33.88	2.48	26.94	112	0.39
199	4.00	33.824	3.27		69.5	0.00	26.87	300	3.78	33.95	1.78	27.00	107	0.45
249	3.77	33.878	2.49		81.4	0.00	26.94							
299	3.78	33.951	1.79		90.4	0.00	27.00							
300	3.78f)	33.952e)	1.78e)		-	-	(27.00)							

a) Although not indicated in the tabulation, generally two casts were made at a station, the shallow cast to 300 meters and the deep cast to a maximum depth of 1250 meters (occasionally 2000 m). The time reported is the time of the messenger release of the shallow cast. The deeper cast was made within 40 minutes after the shallow cast.

b) Values of thermosteric anomaly were computed by the Data Collecting and Processing Group of Scripps Institution.

c) Value interpolated graphically. On PAPA cruises (P-59-1 through P-59-5) where footnotes are used to indicate interpolated and extrapolated values, the parentheses have been omitted because of space limitation.

d) Value interpolated by two-point logarithmic method.

e) Value extrapolated by two-point logarithmic method.

f) Value extrapolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
103	CGS ST. CATHARINES; January 31, 1959; 1856 GCT; 49°50'N, 145°16'W; sounding, missing; wind, 180°, 15 kt; weather, fog; sea, rough.													
0	5.60	32.781	6.88	1.51	30.5		25.87	0	5.60	32.78	6.88	25.87	214	0.00
10	5.49	32.820	6.90	1.25	29.8		25.92	10	5.49	32.82	6.90	25.92	209	0.02
20	5.50a)	32.820a)	6.84b)	-	-		(25.91)	20	5.50	32.82	6.84	25.91	210	0.04
30	5.46	32.822	6.81	1.28	30.6		25.92	30	5.46	32.82	6.81	25.92	209	0.06
50	5.48	32.826	6.93	1.40	30.5		25.92	50	5.48	32.83	6.93	25.92	209	0.11
74	5.49	32.831	6.83	1.19	30.0		25.92	75	5.49	32.84	6.83	25.93	208	0.16
99	5.49	32.928	6.75	1.34	33.8		26.00	100	5.48	32.96	6.66	26.03	199	0.21
124	5.23	33.760	4.66	1.99	-		26.69	125	5.21	33.76	4.64	26.69	136	0.25
149	4.80	33.788	4.12	1.99	56.3		26.76	150	4.78	33.79	4.11	26.76	129	0.29
173	4.35	33.794	3.81	2.14	63.6		26.81	175	4.33	33.80	3.79	26.82	124	0.32
198	4.11	33.812	3.54	2.25	67.3		26.85	200	4.10	33.81	3.51	26.86	120	0.35
248	3.85	33.852	2.83	2.10	79.2		26.91	250	3.85	33.85	2.81	26.91	115	0.41
297	3.79	33.892	2.26	2.62	82.9		26.95	300	3.79	33.90	2.23	26.95	111	0.47
385	3.78	34.046	1.33	3.16	98.0		27.07	400	3.76	34.06	1.25	27.09	98	0.58
481	3.68	34.141	0.87	3.05	118		27.16	500	3.65	34.16	0.85	27.17	91	0.68
724	3.31	34.291	0.60	3.25	125		27.31	600	3.48	34.22	0.73	27.24	84	0.77
936	2.93	34.384	0.49	3.15	145		27.42	700	3.34	34.28	0.63	27.30	78	0.86
1200	2.60	34.453	0.53	3.38	156		27.51	800	3.16	34.33	0.56	27.36	73	0.94
1450	2.33	34.515	0.62	3.28	162		27.58	1000	2.84	34.40	0.50	27.44	65	1.09
1500	2.28c)	34.526c)	0.63c)	-	-		(27.59)	1200	2.60	34.45	0.53	27.51	58	1.23
								1500	2.28	34.53	0.63	27.59	51	1.41
104	CGS ST. CATHARINES; February 4, 1959; 1906 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 250°, 10 kt; weather, intermittent slight drizzle; sea, missing.													
0	5.60	32.801	7.02		28.9	0.15	25.89	0	5.60	32.80	7.02	25.89	212	0.00
10	5.50	32.809	7.01		27.0	0.12	25.91	10	5.50	32.81	7.01	25.91	210	0.02
20	5.50a)	32.810a)	6.98b)		-	-	(25.91)	20	5.50	32.81	6.98	25.91	210	0.04
30	5.50a)	32.840a)	6.96b)		-	-	(25.93)	30	5.50	32.84	6.96	25.93	208	0.06
48	5.47	32.841	6.92		30.7	0.12	25.93	50	5.47	32.84	6.92	25.93	208	0.11
72	5.48	32.843	6.88		30.1	0.16	25.93	75	5.48	32.84	6.87	25.94	207	0.16
87	5.47	32.847	6.81		31.0	0.15	25.94	100	5.43	33.10	6.25	26.14	188	0.21
97	5.48	32.923	6.52		31.3	0.12	26.00	125	4.98	33.74	4.57	26.70	135	0.25
106	5.32	33.431	5.73		39.0	0.00	26.42	150	4.59	33.78	4.14	26.78	128	0.28
121	5.04	33.730	4.65		48.2	0.00	26.69	175	4.22	33.79	3.79	26.82	124	0.32
141	4.75	33.784	4.28		53.7	0.00	26.76	200	4.01	33.81	3.43	26.86	120	0.35
171	4.26	33.787	3.84		62.0	0.00	26.82							
196	4.04	33.804	3.48		65.5	0.00	26.85							
200	4.01c)	33.807c)	3.43c)		-	-	(26.86)							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; February 7, 1959; 1908 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 300°, 15 kt; weather, overcast; sea, rough.														105
0	5.20	32.818	7.20	1.61	28.6		25.95	0	5.20	32.82	7.20	25.95	206	0.00
10	5.41	32.808	7.21	1.46	28.2		25.92	10	5.41	32.81	7.21	25.92	209	0.02
20	5.40a)	32.810a)	7.15b)	-	-		(25.92)	20	5.40	32.81	7.15	25.92	209	0.04
30	5.37	32.808	7.09	1.56	28.6		25.92	30	5.37	32.81	7.09	25.92	209	0.06
49	5.39	32.814	7.09	1.63	28.7		25.92	50	5.39	32.81	7.09	25.92	209	0.10
74	5.41	32.811	7.08	1.43	29.1		25.92	75	5.41	32.81	7.08	25.92	209	0.16
99	5.41	32.810	7.10	1.43	29.1		25.92	100	5.38	32.85	6.99	25.95	206	0.21
123	4.83	33.682	4.75	2.02	51.8		26.67	125	4.80	33.69	4.70	26.68	137	0.25
148	4.54	33.768	4.21	2.08	57.7		26.77	150	4.52	33.77	4.19	26.78	128	0.29
173	4.28	33.783	3.92	2.10	63.1		26.81	175	4.26	33.78	3.86	26.81	125	0.32
198	4.07	33.797	3.21	2.26	68.2		26.85	200	4.06	33.80	3.20	26.85	121	0.35
248	3.74a)	33.852	2.89	2.52	77.2		(26.92)	250	3.74	33.86	2.86	26.92	114	0.41
298	3.69	33.922	2.04	2.78	86.8		26.98	300	3.69	33.93	2.02	26.99	108	0.47
374	3.70	34.055	1.34	2.82	99.7		27.09	400	3.69	34.08	1.24	27.11	96	0.58
469	3.68	34.128	0.99	2.88	108		27.15	500	3.63	34.15	0.94	27.17	91	0.67
717	3.32	34.280	0.72	2.98	126		27.30	600	3.47	34.22	0.83	27.24	84	0.76
943	2.90	34.380	0.56	3.07	141		27.42	700	3.34	34.27	0.73	27.29	79	0.85
1162	2.61	34.445	0.59	3.16	148		27.50	800	3.15	34.32	0.65	27.35	74	0.94
1484	2.29	34.528	0.73	3.13	159		27.59	1000	2.82	34.40	0.57	27.44	65	1.09
1500	2.28c)	34.532c)	0.74c)	-	-		(27.60)	1200	2.57	34.46	0.62	27.51	58	1.22
								1500	2.28	34.53	0.74	27.60	50	1.41
CGS ST. CATHARINES; February 14, 1959; 1918 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 360°, 25 kt; weather, partly cloudy; sea, very rough.														106
0	4.80	32.900	7.18	1.61	29.6		26.06	0	4.80	32.90	7.18	26.06	196	0.00
9	5.22	32.820	7.24	1.54	30.0		25.95	10	5.22	32.82	7.24	25.95	206	0.02
20	5.20a)	32.820a)	7.19b)	-	-		(25.95)	20	5.20	32.82	7.19	25.95	206	0.04
27	5.20	32.837	7.17b)	-	-		25.96	30	5.20	32.84	7.17	25.96	205	0.06
45	5.22	32.825	7.13	1.52	30.2		25.95	50	5.22	32.82	7.13	25.95	206	0.10
68	5.23	32.819	7.12	1.49	30.5		25.94	75	5.23	32.82	7.08	25.95	206	0.16
91	5.24	32.822	7.00	1.39	31.0		25.95	100	5.17	33.14	6.20	26.20	183	0.20
113	5.07	33.553	5.17	1.79	46.2		26.54	125	4.78	33.66	4.70	26.66	139	0.25
134	4.58	33.738	4.38	2.08	57.1		26.74	150	4.34	33.76	4.13	26.79	127	0.28
156	4.25	33.772	4.04	2.10	62.0		26.81	175	4.13	33.78	3.88	26.83	123	0.31
178	4.11	33.786	3.85	2.28	64.0		26.83	200	3.96	33.80	3.55	26.86	120	0.34
222	3.82	33.815	3.28	2.44	72.2		26.88	250	3.77	33.86	2.76	26.93	113	0.40
264	3.74	33.880	2.52	2.80	82.1		26.94	300	3.70	33.93	2.03	26.99	108	0.46
350	3.65	34.000	1.43	3.08	97.8		27.05	400	3.69	34.08	1.08	27.11	96	0.56
394	3.70	34.071	1.09	3.06	105		27.10	500	3.55	34.17	0.85	27.19	89	0.66
600	3.43	34.246	0.66	3.24	123		27.27	600	3.43	34.25	0.66	27.27	81	0.75
785	3.16	34.342	0.58	3.28	134		27.37	700	3.28	34.30	0.62	27.32	76	0.84
995	2.76	34.414	0.58	3.21	144		27.46	800	3.13	34.35	0.58	27.37	72	0.92
1200	2.54	34.469	0.64	3.20	150		27.52	1000	2.75	34.42	0.58	27.46	63	1.06
1642	2.14	34.554	0.94	3.18	159		27.63	1200	2.54	34.47	0.64	27.52	57	1.20
								1500	2.26	34.53	0.85	27.60	50	1.38

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
107	CGS ST. CATHARINES; February 18, 1959; 1920 GCT; 50°00'N, 145°16'W; sounding, missing; wind, 280°, 20 kt; weather, cloudy; sea, very high.													
0	5.10	32.882	7.26		29.8	0.22	26.01	0	5.10	32.88	7.26	26.01	201	0.00
10	5.20	32.836	7.01		29.7	0.19	25.96	10	5.20	32.84	7.01	25.96	205	0.02
20	5.20a)	32.840a)	7.08b)		-	-	(25.96)	20	5.20	32.84	7.08	25.96	205	0.04
30	5.20a)	32.840a)	7.13b)		-	-	(25.96)	30	5.20	32.84	7.13	25.96	205	0.06
49	5.17	32.841	7.20		29.4	0.20	25.97	50	5.17	32.84	7.20	25.97	204	0.10
73	5.20	32.839	7.18		29.7	0.20	25.96	75	5.20	32.84	7.18	25.97	204	0.16
98	5.24	32.896	7.18		30.6	0.21	26.00	100	5.25	32.89	7.18	26.00	202	0.21
108	5.28	32.863	7.18		30.0	0.20	25.97	125	5.11	33.64	5.02	26.61	144	0.25
117	5.23	33.316	5.92		40.5	0.03	26.34	150	4.76	33.78	4.37	26.76	129	0.28
127	5.08	33.714	4.79		50.9	0.00	26.67	175	4.43	33.79	4.11	26.80	126	0.32
147	4.80	33.776	4.40		55.5	0.00	26.75	200	4.07	33.80	3.73	26.84	122	0.35
171	4.50	33.791	4.17		60.9	0.00	26.80	250	3.73	33.85	2.83	26.92	114	0.41
196	4.10	33.791	3.81		66.6	0.00	26.84	300	3.72	33.93	2.06	26.98	109	0.47
246	3.73	33.847	2.90		77.6	-	26.92							
296	3.72	33.923	2.12		87.7	-	26.98							
300	3.72c)	33.929c)	2.06c)		-	-	(26.98)							
108	CGS ST. CATHARINES; February 25, 1959; 1920 GCT; 50°10'N, 145°16'W; sounding, missing; wind, 190°, 25 kt; weather, overcast; sea, very rough.													
0	4.90	32.884	7.49	1.74	31.0		26.03	0	4.90	32.88	7.49	26.03	199	0.00
10	5.03	32.838	7.36	1.77	31.1		25.98	10	5.03	32.84	7.36	25.98	204	0.02
20	5.00a)	32.840a)	7.28b)	-	-		(25.99)	20	5.00	32.84	7.28	25.99	203	0.04
28	5.00	32.838	7.24	1.50	30.5		25.99	30	5.00	32.84	7.24	25.99	203	0.06
47	5.02	32.843	7.26	1.51	30.6		25.99	50	5.02	32.84	7.25	25.99	203	0.10
71	5.04	32.845	7.17	1.59	31.3		25.99	75	5.04	32.84	7.16	25.99	203	0.15
95	5.04	32.842	7.11	1.48	30.7		25.98	100	4.99	33.02	6.60	26.13	189	0.20
118	4.84	33.614	4.94	2.16	49.3		26.62	125	4.70	33.66	4.67	26.67	138	0.24
142	4.40	33.780	4.08	2.24	61.7		26.80	150	4.30	33.79	3.96	26.82	124	0.28
166	4.12	33.810	3.76	2.21	65.6		26.85	175	4.03	33.80	3.61	26.86	120	0.31
190	3.88	33.797	3.35	2.47	72.5		26.86	200	3.83	33.81	3.18	26.88	118	0.34
237	3.68	33.856	2.63	2.68	81.2		26.93	250	3.65	33.88	2.43	26.95	111	0.40
285	3.59	33.923	1.92	2.93	90.1		26.99	300	3.61	33.95	1.78	27.01	106	0.45
380	3.70	34.064	1.15	2.77	104		27.09	400	3.68	34.09	1.09	27.12	95	0.56
500	3.59	34.190	0.77	3.02	116		27.21	500	3.59	34.19	0.77	27.21	87	0.65
730	3.23	34.297	0.64	3.11	131		27.33	600	3.42	34.24	0.71	27.26	82	0.74
975	2.79	34.401	0.59	3.08	146		27.45	700	3.27	34.28	0.65	27.31	77	0.83
1215	2.54	34.469	0.58	3.09	156		27.52	800	3.09	34.33	0.63	27.36	73	0.91
1450	2.28	34.529	0.69	3.09	160		27.59	1000	2.76	34.41	0.59	27.46	63	1.06
1500	2.23c)	34.541c)	0.72c)	-	-		(27.61)	1200	2.55	34.46	0.58	27.52	57	1.19
								1500	2.23	34.54	0.72	27.61	49	1.38

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; March 3, 1959; 1912 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 160°, 30 kt; weather, intermittent slight drizzle; sea, very rough.														109
0	5.20	32.856	7.21	1.43	30.6	0.20	25.98	0	5.20	32.86	7.21	25.98	204	0.00
9	4.98	32.852	7.22	1.47	31.0	0.12	26.00	10	4.98	32.85	7.21	26.00	202	0.02
20	4.96a)	32.850a)	7.17b)	-	-	-	(26.00)	20	4.96	32.85	7.17	26.00	202	0.04
26	4.95	32.853	7.15	1.47	30.3	0.16	26.00	30	4.95	32.85	7.15	26.00	202	0.06
43	4.96	32.855	7.15	1.42	30.8	0.18	26.00	50	4.96	32.86	7.15	26.00	202	0.10
65	4.96	32.854	7.15	1.45	31.1	0.18	26.00	75	4.97	32.86	7.10	26.01	201	0.15
87	4.98	32.867	7.06	1.44	30.7	0.12	26.01	100	5.00	32.86	7.11	26.01	201	0.20
108	5.01	32.863	7.15	1.44	31.4	0.17	26.00	125	4.84	33.43	5.41	26.47	157	0.25
130	4.79	33.580	4.94	2.04	50.6	0.01	26.60	150	4.30	33.74	4.08	26.78	128	0.28
153	4.23	33.768	3.95	2.28	62.8	0.00	26.81	175	3.99	33.78	3.23	26.84	122	0.32
175	3.99	33.785	3.23	2.30	68.5	-	26.84	200	3.83	33.81	3.09	26.88	118	0.35
220	3.71	33.830	3.00	2.52	78.4	-	26.91	250	3.68	33.87	2.51	26.95	111	0.41
266	3.66	33.895	2.27	2.79	88.3	-	26.96	300	3.67	33.94	1.98	27.00	107	0.46
360	3.68	34.002	1.55b)	2.91	96.8	-	27.05	400	3.67	34.04	1.29	27.08	99	0.57
420	3.66	34.056	1.16	3.10	101	-	27.09	500	3.56	34.14	0.96	27.16	92	0.67
654	3.41	34.257	0.64	3.01	120	-	27.28	600	3.46	34.22	0.74	27.24	84	0.76
923	2.98	34.372	0.57	2.93	122	-	27.41	700	3.33	34.28	0.63	27.30	78	0.85
1144	2.64	34.447	0.63	3.10	143	-	27.50	800	3.16	34.32	0.59	27.35	74	0.93
1380	2.41	34.500	0.60	3.06	151	-	27.56	1000	2.85	34.40	0.59	27.44	65	1.08
1894	2.00	34.584	1.12	3.02	158	-	27.66	1200	2.58	34.46	0.62	27.51	58	1.22
2000	1.93c)	34.598c)	1.21c)	-	-	-	(27.68)	1500	2.30	34.52	0.74	27.59	51	1.41
								2000	1.93	34.60	1.21	27.68	42	1.69
CGS ST. CATHARINES; April 14, 1959; 1136 GCT; 48°48'N, 127°58'W; sounding, 1300 fm; wind, 310°, 20 kt; weather, partly cloudy; sea, rough.														1
0	7.00	32.314					25.33	0	7.00	32.31		25.33	265	0.00
10	8.65	32.253					25.05	10	8.65	32.25		25.05	292	0.03
19	8.64	32.316					25.10	20	8.62	32.34		25.11	286	0.06
29	8.43	32.479					25.26	30	8.42	32.48		25.26	272	0.08
48	8.32	32.498					25.29	50	8.28	32.50		25.30	268	0.14
72	7.93	32.551					25.38	75	7.87	32.63		25.46	253	0.21
95	7.49	33.120					25.89	100	7.52	33.20		25.95	206	0.26
119	7.64	33.492					26.16	125	7.58	33.53		26.21	182	0.31
142	7.43	33.644					26.31	150	7.36	33.70		26.36	167	0.36
165	7.25	33.786					26.45	175	7.17	33.81		26.48	156	0.40
188	7.08	33.837					26.51	200	7.03	33.88		26.55	149	0.44
233	6.89	33.968					26.64	250	6.67	33.98		26.68	137	0.51
276	6.37	33.992					26.73							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

	OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
2	CGS ST. CATHARINES; April 15, 1959; 2211 GCT; 49°01'N, 131°00'W; sounding, 1500 fm; wind, 320°, 12 kt; weather, cloudy; sea, rough.														
	0	8.20	32.674					25.44	0	8.20	32.67		25.44	255	0.00
	10	7.83	32.594					25.43	10	7.83	32.59		25.43	256	0.03
	20	7.83	32.599					25.44	20	7.83	32.60		25.44	255	0.05
	29	7.80	32.594					25.44	30	7.80	32.59		25.44	255	0.08
	49	7.76	32.594					25.44	50	7.76	32.59		25.44	255	0.13
	73	7.78	32.594					25.44	75	7.73	32.62		25.47	252	0.19
	98	7.18	32.870					25.74	100	7.16	32.92		25.78	222	0.25
	122	6.92	33.400					26.19	125	6.89	33.44		26.23	180	0.30
	146	6.73	33.710					26.46	150	6.69	33.73		26.48	156	0.35
	169	6.49	33.806					26.57	175	6.43	33.82		26.59	146	0.38
	191	6.28	33.874					26.65	200	6.15	33.88		26.67	138	0.42
	234	5.70	33.901					26.74	250	5.58	33.91		26.76	129	0.49
	263	5.48	33.913					26.78	300	5.22	33.94		26.83	123	0.56
	470	4.32	34.046					27.02	400	4.64	34.01		26.95	111	0.68
	718	3.68	34.268					27.26	500	4.23	34.08		27.05	102	0.79
	964	3.32	34.377					27.38	600	3.95	34.17		27.16	92	0.89
	1204	2.84	34.450					27.48	700	3.72	34.26		27.24	84	0.98
									800	3.55	34.31		27.30	78	1.07
									1000	3.24	34.39		27.40	69	1.24
									1200	2.85	34.45		27.48	61	1.38
3	CGS ST. CATHARINES; April 16, 1959; 0935 GCT; 49°11'N, 134°00'W; sounding, 2000 fm; wind, missing; weather, cloudy; sea, moderate.														
	0	6.60	32.643					25.64	0	6.60	32.64		25.64	236	0.00
	10	6.96	32.598					25.56	10	6.96	32.60		25.56	243	0.02
	20	6.80	32.598					25.58	20	6.80	32.60		25.58	242	0.05
	30	6.74	32.593					25.58	30	6.74	32.59		25.58	242	0.07
	50	6.69	32.592					25.59	50	6.69	32.59		25.59	240	0.12
	75	6.66	32.588					25.59	75	6.66	32.59		25.59	240	0.18
	100	6.49	32.623					25.64	100	6.49	32.62		25.64	236	0.24
	125	6.52	33.253					26.13	125	6.52	33.25		26.13	189	0.30
	150	6.41	33.528					26.36	150	6.41	33.53		26.36	167	0.34
	175	6.09	33.729					26.56	175	6.09	33.73		26.56	148	0.38
	200	5.74	33.812					26.67	200	5.74	33.81		26.67	138	0.42
	250	5.36	33.881					26.77	250	5.36	33.88		26.77	128	0.49
	300	5.16	33.964					26.86	300	5.16	33.96		26.86	120	0.55
	499	4.24	34.134					27.09	400	4.64	34.06		26.99	108	0.67
	757	3.54	34.289					27.29	500	4.24	34.14		27.10	97	0.78
	1009	3.05	34.414					27.43	600	3.93	34.20		27.18	90	0.88
	1261	2.68	34.469					27.51	700	3.67	34.26		27.25	83	0.97
									800	3.45	34.31		27.32	76	1.06
									1000	3.07	34.41		27.43	66	1.21
									1200	2.76	34.46		27.49	60	1.36

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; April 16, 1959; 1730 GCT; 49°21'N, 136°39'W; sounding, 2000 fm; wind, 270°, force missing; weather, overcast; sea, slight.														4
0	7.70	32.640					25.49	0	7.70	32.64		25.49	250	0.00
10	7.10	32.616					25.55	10	7.10	32.62		25.55	244	0.02
20	7.09	32.614					25.55	20	7.09	32.61		25.55	244	0.05
30	6.99	32.608					25.56	30	6.99	32.61		25.56	243	0.07
50	6.91	32.612					25.57	50	6.91	32.61		25.57	242	0.12
75	7.06	32.604					25.55	75	7.06	32.60		25.55	244	0.18
99	6.92	32.606					25.57	100	6.92	32.61		25.57	242	0.25
123	6.88	32.668					25.62	125	6.89	32.68		25.63	237	0.31
147	6.99	32.758					25.68	150	6.93	32.84		25.75	225	0.37
170	6.58	33.341					26.19	175	6.48	33.39		26.24	179	0.42
193	6.13	33.566					26.43	200	6.01	33.60		26.47	157	0.46
238	5.44	33.749					26.66	250	5.30	33.79		26.71	134	0.54
273	5.05	33.875					26.80	300	4.90	33.91		26.84	122	0.60
492	4.10	34.090					27.07	400	4.44	34.01		26.98	109	0.72
742	3.54	34.265					27.27	500	4.08	34.10		27.08	99	0.83
992	3.10	34.383					27.41	600	3.83	34.17		27.17	91	0.93
1242	2.68	34.447					27.49	700	3.62	34.24		27.24	84	1.02
								800	3.43	34.30		27.31	77	1.11
								1000	3.09	34.38		27.41	68	1.27
								1200	2.74	34.44		27.48	61	1.42
CGS ST. CATHARINES; April 17, 1959; 0320 GCT; 49°30'N, 139°29'W; sounding, 2000 fm; wind, 200°, 5 kt; weather, fog in patches; sea, slight.														5
0	7.10	32.802					25.70	0	7.10	32.80		25.70	230	0.00
10	6.87	32.800					25.73	10	6.87	32.80		25.73	227	0.02
20	6.71	32.821					25.76	20	6.71	32.82		25.76	224	0.05
30	6.62	32.830					25.78	30	6.62	32.83		25.78	222	0.07
50	6.30	32.878					25.86	50	6.30	32.88		25.86	215	0.11
74	6.19	32.926					25.91	75	6.19	32.93		25.92	209	0.17
99	6.20	32.993					25.97	100	6.20	33.01		25.98	204	0.22
124	6.27	33.328					26.22	125	6.25	33.34		26.23	180	0.27
149	5.83	33.652					26.53	150	5.82	33.66		26.54	150	0.31
173	5.55	33.756					26.65	175	5.52	33.76		26.65	140	0.35
198	5.23	33.818					26.73	200	5.21	33.82		26.74	131	0.38
248	4.67	33.864					26.83	250	4.66	33.87		26.84	122	0.45
297	4.46	33.916					26.90	300	4.45	33.92		26.90	116	0.51
480	4.11	34.105					27.09	400	4.24	34.03		27.01	106	0.62
730	3.47	34.270					27.28	500	4.05	34.12		27.10	97	0.73
								600	3.77	34.19		27.19	89	0.83
								700	3.53	34.25		27.26	82	0.92
CGS ST. CATHARINES; April 17, 1959; 1629 GCT; 49°45'N, 142°06'W; sounding, 2200 fm; wind, 030°, 4 kt; weather, fog; sea, calm.														6
0	6.90	32.870					25.78	0	6.90	32.87		25.78	222	0.00
10	6.40	32.885					25.86	10	6.40	32.88		25.86	215	0.02
20	6.30	32.881					25.86	20	6.30	32.88		25.86	215	0.04
30	5.87	32.882					25.92	30	5.87	32.88		25.92	209	0.06
50	5.82	32.881					25.92	50	5.82	32.88		25.92	209	0.11
75	5.84	32.882					25.92	75	5.84	32.88		25.92	209	0.16
100	5.82	32.890					25.93	100	5.82	32.89		25.93	208	0.21
125	5.60	33.603					26.52	125	5.60	33.60		26.52	152	0.26
150	5.10	33.780					26.72	150	5.10	33.78		26.72	133	0.30
175	4.57	33.785					26.78	175	4.57	33.78		26.78	128	0.33
200	4.28	33.798					26.82	200	4.28	33.80		26.82	124	0.36
250	3.97	33.855					26.90	250	3.97	33.86		26.90	116	0.42
299	3.90	33.913					26.95	300	3.90	33.91		26.96	110	0.48
498	3.80	34.134					27.14	400	3.84	34.04		27.06	101	0.59
750	3.30	34.283					27.31	500	3.80	34.14		27.14	93	0.69
1002	2.88	34.387					27.43	600	3.57	34.20		27.22	86	0.79
								700	3.38	34.26		27.28	80	0.88
								800	3.21	34.31		27.33	75	0.96
								1000	2.88	34.39		27.43	66	1.11

201 CGS ST. CATHARINES; April 18, 1959; 1850 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 140°, 7 kt; weather, fog; sea, slight.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	6.20	32.857					25.86	0	6.20	32.86		25.86	215	0.00
10	5.76	32.843					25.90	10	5.76	32.84		25.90	211	0.02
19	5.88	32.852					25.89	20	5.83	32.85		25.90	211	0.04
29	5.45	32.869					25.96	30	5.41	32.87		25.96	205	0.06
48	4.87	32.867					26.02	50	4.86	32.87		26.03	199	0.10
72	4.72	32.889					26.06	75	4.72	32.89		26.06	196	0.15
96	4.72	32.895					26.06	100	4.74	33.02		26.16	186	0.20
120	4.81	33.612					26.62	125	4.75	33.65		26.66	139	0.24
145	4.52	33.787					26.79	150	4.45	33.79		26.80	126	0.28
169	4.19	33.806					26.84	175	4.12	33.81		26.85	121	0.31
194	3.92	33.820					26.88	200	3.90	33.83		26.89	117	0.34
244	3.75	33.865					26.93	250	3.75	33.87		26.94	112	0.40
294	3.72	33.937					26.99	300	3.72	33.94		27.00	107	0.46
484	3.66	34.127					27.15	400	3.68	34.05		27.09	98	0.56
731	3.30	34.284					27.31	500	3.63	34.14		27.16	92	0.66
978	2.90	34.379					27.42	600	3.47	34.21		27.23	85	0.75
1225	2.56	34.459					27.51	700	3.34	34.27		27.29	79	0.84
								800	3.18	34.31		27.34	74	0.92
								1000	2.87	34.39		27.43	66	1.08
								1200	2.59	34.45		27.51	58	1.22

202 CGS ST. CATHARINES; April 24, 1959; 1900 GCT; 50°00'N, 144°44'W; sounding, 2200 fm; wind, 270°, 10 kt; weather, overcast; sea, moderate.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	7.20	32.854	7.44	2.22			25.73	0	7.20	32.85	7.44	25.73	227	0.00
10	6.71	32.871	7.39	1.87			25.80	10	6.71	32.87	7.39	25.80	221	0.02
20	5.81a)	32.876a)	7.48a)	-			(25.92)	20	5.81	32.88	7.48	25.92	209	0.04
29	5.23	32.880	7.55	1.86			25.99	30	5.21	32.88	7.54	26.00	202	0.06
48	4.86	32.879	7.32	2.11			26.03	50	4.86	32.88	7.32	26.04	198	0.10
72	4.81	32.895	7.31	1.97			26.05	75	4.80	32.89	7.31	26.05	197	0.16
96	4.76	32.887	7.29	2.06			26.05	100	4.77	32.95	7.09	26.10	192	0.20
120	4.82	33.227	6.16	2.35			26.31	125	4.78	33.35	5.69	26.41	163	0.25
144	4.66	33.779	4.05	2.21			26.77	150	4.59	33.78	4.04	26.78	128	0.29
168	4.38	33.787	4.02	3.01			26.80	175	4.29	33.79	3.94	26.82	124	0.32
192	4.08	33.790	3.76	3.16			26.84	200	4.04	33.80	3.63	26.85	121	0.35
247	3.82	33.858	2.96	-			26.92	250	3.81	33.86	2.88	26.92	114	0.41
296	3.65	33.913	1.77	3.60			26.98	300	3.65	33.92	1.75	26.98	109	0.47
395	3.72	34.049	1.30	-			27.08	400	3.72	34.05	1.28	27.08	99	0.57
476	3.70	34.117	0.96	3.79			27.14	500	3.65	34.14	0.92	27.16	92	0.67
713	3.32	34.288	0.64	4.06			27.31	600	3.48	34.22	0.77	27.24	84	0.77
								700	3.34	34.28	0.65	27.30	78	0.85

203 CGS ST. CATHARINES; April 28, 1959; 1928 GCT; 50°00'N, 145°16'W; sounding, 2200 fm; wind, 030°, 25 kt; weather, intermittent slight drizzle; sea, rough.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	6.20	32.933	7.55	29.6	0.19		25.92	0	6.20	32.93	7.55	25.92	209	0.00
2	5.95	32.914	7.54	31.1	0.16		25.93	10	5.94	32.91	7.59	25.94	207	0.02
10	5.94	32.913	7.59	30.9	0.16		25.94	20	5.94	32.91	7.58	25.93	208	0.04
20	5.94b)	32.910b)	7.58a)	-	-		(25.93)	30	5.83	32.92	7.58	25.95	206	0.06
29	5.89	32.917	7.58	31.3	0.16		25.94	50	4.88	32.91	7.50	26.06	196	0.10
48	4.88	32.906	7.50	26.7	0.19		26.05	75	4.92	32.95	7.48	26.08	194	0.15
72	4.90	32.939	7.49	32.1	0.19		26.08	100	4.98	32.99	7.28	26.11	191	0.20
86	5.00	32.978	7.44	31.8	0.16		26.10	125	4.82	33.65	4.84	26.65	140	0.24
95	4.99	32.983	7.35	31.4	0.18		26.10	150	4.52	33.80	3.99	26.80	126	0.28
105	4.98	33.000	7.22	32.6	0.17		26.12	175	4.20	33.81	3.72	26.84	122	0.31
114	4.96	33.364	5.92	42.2	0.10		26.41	200	3.99	33.81	3.43	26.87	119	0.34
124	4.84	33.631	4.92	-	0.04		26.63	250	3.77	33.86	2.81	26.92	114	0.40
133	4.70	33.780	4.28	57.2	-		26.76							
143	4.62	33.800	4.05	59.5	-		26.79							
167	4.28	33.807	3.82	63.2	-		26.83							
191	4.04	33.806	3.54	67.2	-		26.86							
240	3.80	33.844	2.97	73.7	-		26.91							
289	3.68	33.903	2.26	82.2	-		26.97							

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; April 29, 1959; 1910 GCT; 50°00'N, 144°44'W; sounding, 2200 fm; wind, 340°, 25 kt; weather, cloudy; sea, rough. 203A

0	5.90	32.926	7.62	1.93	32.5		25.95	0	5.90	32.93	7.62	25.95	206	0.00
2	5.87	32.871	7.68	2.61	32.4		25.91	10	5.88	32.87	7.68	25.91	210	0.02
5	5.88	32.871	7.55	1.74	32.0		25.91	20	5.88	32.87	7.58	25.91	210	0.04
10	5.88	32.868	7.68	1.89	32.0		25.91	30	5.83	32.87	7.49	25.91	210	0.06
15	5.85	32.871	7.54	2.10	32.0		25.91	50	4.92	32.88	7.59	26.03	199	0.10
20	5.88	32.872	7.58	1.88	31.6		25.91							
24	5.85	32.870	7.53	1.74	31.6		25.91							
29	5.84	32.871	7.48	1.88	31.9		25.91							
39	5.77	32.863	7.57	1.84	32.1		25.92							
49	4.92	32.880	7.59	1.91	31.5		26.03							
50	4.92a)	32.882b)	7.59b)	-	-		(26.03)							

CGS ST. CATHARINES; May 1, 1959; 1900 GCT; 49°50'N, 145°00'W; sounding, 2200 fm; wind, 340°, 18 kt; weather, rain showers; sea, rough. 204

0	5.90	33.042	7.55	2.20	27.0	c)	26.04	0	5.90	33.04	7.55	26.04	198	0.00
9	5.97	32.886	7.64	1.74	30.4		25.91	10	5.97	32.89	7.63	25.91	210	0.02
20	5.95d)	32.885d)	7.53e)	-	-		(25.91)	20	5.95	32.88	7.53	25.91	210	0.04
29	5.92	32.885	7.47	1.70	30.4		25.92	30	5.85	32.88	7.47	25.92	209	0.06
48	4.84	32.884	7.49	2.02	31.5		26.04	50	4.83	32.88	7.49	26.04	198	0.10
72	4.74	32.889	7.52	1.94	32.6		26.05	75	4.75	32.89	7.54	26.06	196	0.15
96	4.82	32.927	7.67	1.87	32.6		26.08	100	4.83	33.01	7.30	26.14	188	0.20
120	4.86	33.405	5.62	2.41	43.0		26.45	125	4.84	33.49	5.32	26.52	152	0.24
144	4.75	33.787	4.26	2.51	52.9		26.76	150	4.69	33.79	4.20	26.77	128	0.28
167	4.52	33.792	4.05	2.34	57.1		26.79	175	4.43	33.80	3.99	26.81	125	0.31
190	4.26	33.826	3.88	2.66	61.7		26.85	200	4.17	33.83	3.73	26.86	120	0.34
237	3.85	33.838	3.23	3.08	71.7		26.90	250	3.83	33.86	3.02	26.92	114	0.40
284	3.78	33.900	2.53	3.17	77.3		26.96	300	3.77	33.92	2.34	26.97	110	0.46
375	3.72	33.990	1.58	3.48	89.5		27.03	400	3.68	34.02	1.44	27.06	101	0.57
484	3.55e)	34.119	1.03	3.64	102.6		(27.15)	500	3.52	34.13	1.01	27.17	91	0.67
725	3.27	34.299	0.72	3.76	122.4		27.32	600	3.40	34.22	0.86	27.24	84	0.76
979	2.90	34.392	0.68	7.44	136.2		27.43	700	3.29	34.28	0.74	27.31	77	0.85
1239	2.54	34.505	0.65	5.32	144.0		27.55	800	3.15	34.33	0.71	27.36	73	0.93
1496	2.33	34.526	0.76	4.12	150.3		27.59	1000	2.87	34.40	0.68	27.44	65	1.08
2000	1.95	34.599	1.39	3.63	-		27.68	1200	2.59	34.49	0.65	27.54	56	1.22
								1500	2.33	34.53	0.77	27.59	51	1.40
								2000	1.95	34.60	1.39	27.68	42	1.68

CGS ST. CATHARINES; May 5, 1959; 1857 GCT; 50°10'N, 144°44'W; sounding, 2200 fm; wind, 230°, 17 kt; weather, overcast; sea, rough. 205

0	6.30	32.901	7.53		30.9	0.16	25.88	0	6.30	32.90	7.53	25.88	213	0.00
10	6.14	32.867	7.49		25.0	0.15	25.87	10	6.14	32.87	7.49	25.87	214	0.02
20	6.10	32.865	7.48e)		-	-	25.88	20	6.10	32.86	7.48	25.88	213	0.04
29	6.10	32.867	7.47		29.5	0.12	25.88	30	6.05	32.87	7.47	25.89	212	0.06
49	5.27	32.923	7.52		30.9	0.16	26.02	50	5.25	32.92	7.52	26.02	200	0.11
73	4.86	32.921	7.52		31.4	0.19	26.07	75	4.86	32.92	7.52	26.07	195	0.16
88	4.88	32.934	7.49		31.1	0.17	26.08	100	4.90	32.95	7.39	26.09	193	0.20
97	4.88	32.948	7.40		30.9	0.17	26.09	125	4.93	33.00	7.20	26.12	190	0.25
107	4.94	32.955	7.36		30.2	0.19	26.08	150	4.72	33.75	4.38	26.74	131	0.29
117	4.95	32.960	7.31		30.6	0.20	26.09	175	4.44	33.79	4.11	26.80	126	0.33
127	4.92	33.013	7.18		31.2	0.18	26.13	200	4.14	33.79	3.75	26.84	122	0.36
137	4.82	33.470	5.50		45.2	0.04	26.51	250	3.91	33.84	2.96	26.89	117	0.42
146	4.76	33.739	4.42		51.0	0.02	26.73							
171	4.50	33.785	4.17		57.7	0.00	26.79							
196	4.16	33.791	3.82		62.0	0.00	26.83							
245	3.93	33.829	3.05		71.6	0.00	26.88							
294	3.72	33.887	2.24		80.1	0.00	26.95							

a) Value extrapolated graphically.
b) Value extrapolated by two-point logarithmic method.
c) The following nitrate values were obtained for this station: 0 m, 16.6; 9, 17.2; 48, 18.8; 96, 19.8; 144, 29.2; 190, 27.2; 284, 40.4; 725, 46.8; 979, 34.8 µg at/L.
d) Value interpolated graphically.
e) Value interpolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
206	CGS ST. CATHARINES; May 8, 1959; 1855 GCT; 50°00'N, 145°16'W; sounding, 2200 fm; wind, 260°, 18 kt; weather, overcast; sea, rough.													
0	6.70	32.913	7.56				25.84	0	6.70	32.91	7.56	25.84	217	0.00
10	6.34	32.874	7.31				25.85	10	6.34	32.87	7.31	25.85	217	0.02
20	6.33a)	32.875a)	7.34b)				(25.86)	20	6.33	32.88	7.34	25.86	215	0.04
29	6.32	32.875a)	7.35				(25.86)	30	6.32	32.88	7.36	25.86	215	0.06
49	6.26	32.871	7.46				25.86	50	6.26	32.87	7.46	25.86	215	0.11
73	6.34	32.875	7.52				25.86	75	6.29	32.88	7.53	25.86	215	0.16
97	5.80	32.890	7.64				25.93	100	5.66	32.89	7.60	25.95	206	0.22
121	4.79	32.893	7.37				26.05	125	4.81	32.91	7.29	26.07	195	0.27
145	4.88	33.008	6.93				26.13	150	4.88	33.17	6.41	26.26	177	0.31
169	4.87	33.737	4.54				26.71	175	4.79	33.76	4.39	26.74	131	0.35
193	4.55	33.807	3.98				26.80	200	4.45	33.81	3.83	26.82	124	0.39
240	3.93	33.834	3.06				26.89	250	3.88	33.85	2.92	26.90	116	0.45
287	3.71	33.891	2.48				26.96	300	3.71	33.91	2.31	26.97	110	0.50
379	3.72	34.027	1.42				27.06	400	3.71	34.05	1.32	27.08	99	0.61
470	3.69	34.114	1.01				27.14	500	3.63	34.14	0.95	27.16	92	0.71
703	3.30	34.293	0.62				27.32	600	3.45	34.22	0.77	27.24	84	0.80
935	3.01b)	34.379b)	0.64b)				(27.41)	700	3.30	34.29	0.62	27.31	77	0.89
1167	2.79	34.446	0.65				27.48	800	3.17	34.33	0.63	27.36	73	0.97
1399	2.43	34.510	0.72				27.57	1000	2.95	34.40	0.64	27.43	66	1.12
1863	1.94	34.592	1.25				27.67	1200	2.73	34.46	0.66	27.50	59	1.27
								1500	2.31	34.53	0.85	27.59	51	1.46
207	CGS ST. CATHARINES; May 12, 1959; 1903 GCT; 49°50'N, 145°16'W; sounding, 2200 fm; wind, 210°, 17 kt; weather, partly cloudy; sea, moderate.													
0	6.60	32.935	7.47	30.2	0.13		25.87	0	6.60	32.94	7.47	25.87	214	0.00
10	6.62	32.884	7.55	30.0	0.13		25.83	10	6.62	32.88	7.55	25.83	218	0.02
20	6.60a)	32.880a)	7.53b)	-	-		(25.83)	20	6.60	32.88	7.53	25.83	218	0.04
30	6.51	32.878	7.50	30.0	0.12		25.84	30	6.51	32.88	7.50	25.84	217	0.07
50	4.84	32.942	7.50	32.9	0.17		26.09	50	4.84	32.94	7.50	26.09	193	0.11
75	4.68	32.950	7.43	33.9	0.17		26.11	75	4.68	32.95	7.43	26.11	191	0.16
90	4.72	32.962	7.44	34.0	0.18		26.11	100	4.76	33.04	7.31	26.17	185	0.20
100	4.76	33.036	7.31	34.1	0.16		26.17	125	4.94	33.76	4.52	26.72	133	0.24
110	4.89	33.375	5.79	44.9	0.09		26.42	150	4.61	33.80	4.19	26.79	127	0.28
120	4.98	33.734	4.65	53.3	0.02		26.70	175	4.35	33.81	3.85	26.82	124	0.31
130	4.90	33.776	4.41	55.2	-		26.74	200	4.13	33.83	3.48	26.86	120	0.34
139	4.73	33.790	4.31	58.5	-		26.77	250	3.87	33.88	2.80	26.93	113	0.40
149	4.62	33.796	4.20	60.6	-		26.79	300	3.72	33.93	2.13	26.98	109	0.46
174	4.36	33.805	3.86	65.8	-		26.82							
199	4.14	33.826	3.49	70.9	-		26.86							
249	3.87	33.879	2.81	80.6	-		26.93							
299	3.72	33.927	2.14	89.0	-		26.98							
300	3.72c)	33.928c)	2.13c)	-	-		(26.98)							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED								COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N		σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L		g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; May 15, 1959; 1905 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 240°, 35 kt; weather, intermittent moderate drizzle; sea, rough. 208

0	7.10	32.911	7.36	2.18	33.4	a)	25.78	0	7.10	32.91	7.36	25.78	222	0.00
9	6.85	32.877	7.22	1.85	30.3		25.79	10	6.85	32.88	7.22	25.79	222	0.02
20	6.85b)	32.880b)	7.26c)	-	-		(25.79)	20	6.85	32.88	7.26	25.79	222	0.04
27	6.84	32.871	7.28	1.63	31.5		25.79	30	6.53	32.88	7.30	25.83	218	0.07
44	5.36	32.908	7.41	2.05	31.4		26.00	50	5.23	32.92	7.44	26.02	200	0.11
67	4.92	32.948	7.50	1.84	31.9		26.08	75	4.96	32.96	7.44	26.09	193	0.16
89	5.01	32.980	7.32	2.02	31.5		26.10	100	4.96	33.13	6.71	26.22	181	0.21
112	4.92	33.286	6.09	2.14	41.6		26.35	125	4.83	33.57	4.98	26.58	146	0.25
135	4.76	33.765	4.20	2.61	56.1		26.75	150	4.52	33.79	3.98	26.79	127	0.28
159	4.39	33.805	3.85	2.70	62.6		26.82	175	4.19	33.81	3.73	26.84	122	0.31
183	4.10	33.807	3.67	2.79	67.2		26.85	200	3.97	33.83	3.37	26.88	118	0.34
231	3.77	33.866	2.89	3.08	78.5		26.93	250	3.75	33.89	2.60	26.95	111	0.40
280	3.73	33.927	2.17	3.39	86.3		26.98	300	3.72	33.95	1.98	27.00	107	0.46
380	3.70	34.045	1.33	3.64	99.3		27.08	400	3.69	34.07	1.36	27.10	97	0.56
498	3.64	34.154	-	3.76	110.1		27.17	500	3.64	34.16	1.42	27.17	91	0.66
748	3.22	34.316	0.62	3.69	130.7		27.34	600	3.45	34.23	1.06	27.25	83	0.75
1003	2.82	34.411	0.63	3.96	145.3		27.45	700	3.29	34.29	0.75	27.31	77	0.84
1258	2.52	34.471	0.62	3.58	154.0		27.53	800	3.13	34.34	0.62	27.37	72	0.92
1511	2.30	34.538	0.83	3.82	161.0		27.60	1000	2.82	34.41	0.63	27.45	64	1.07
2012	1.95	34.600	1.28	3.72	165.7		27.68	1200	2.58	34.46	0.62	27.51	58	1.21
								1500	2.31	34.54	0.82	27.60	50	1.39
								2000	1.96	34.60	1.27	27.68	42	1.67

CGS ST. CATHARINES; May 19, 1959; 1902 GCT; 50°00'N, 144°44'W; sounding, 2200 fm; wind, 230°, 19 kt; weather, overcast; sea, rough. 209

0	7.10	32.899	7.39		29.1	0.15	25.77	0	7.10	32.90	7.39	25.77	223	0.00
10	7.14	32.861	7.32		29.0	0.14	25.74	10	7.14	32.86	7.32	25.74	226	0.02
20	7.10b)	32.860b)	7.38c)		-	-	(25.74)	20	7.10	32.86	7.38	25.74	226	0.04
29	6.94	32.859	7.43		29.5	0.08	25.76	30	6.91	32.86	7.43	25.77	223	0.07
49	6.44	32.882	7.48		31.1	0.15	25.85	50	6.37	32.88	7.48	25.86	215	0.11
74	4.97	32.913	7.40		32.9	0.19	26.05	75	4.97	32.91	7.40	26.05	197	0.16
89	4.92	32.921	7.40		34.4	0.19	26.06	100	4.94	32.98	7.21	26.11	191	0.21
99	4.94	32.968	7.26		33.8	0.20	26.10	125	5.01	33.61	5.13	26.59	146	0.26
109	4.96	33.099	6.80		36.1	0.17	26.20	150	4.86	33.79	4.31	26.76	129	0.29
118	5.00	33.344	5.98		42.5	0.08	26.39	175	4.50	33.80	4.03	26.80	126	0.32
128	5.01	33.715	4.78		50.1	0.00	26.68	200	4.22	33.81	3.67	26.84	122	0.36
138	4.92	33.768	4.49		54.4	-	26.73	250	3.91	33.85	2.92	26.90	116	0.42
148	4.89	33.790	4.33		55.3	-	26.75	300	3.69	33.91	2.12	26.98	109	0.47
173	4.53	33.799	4.07		61.5	-	26.80							
198	4.23	33.806	3.71		66.3	-	26.84							
248	3.92	33.848	2.96		75.0	-	26.90							
298	3.70	33.911	2.15		86.5	-	26.97							
300	3.69d)	33.913d)	2.12d)		-	-	(26.98)							

CGS ST. CATHARINES; May 20, 1959; 1842 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, light airs; weather, partly cloudy; sea, calm. 209A

0	7.60	32.914	7.38		31.0	0.16	25.72	0	7.60	32.91	7.38	25.72	228	0.00
1	7.28	32.860	7.39		30.2	0.16	25.72	10	7.15	32.86	7.37	25.74	226	0.02
5	7.21	32.864	7.38		30.6	0.15	25.73	20	7.15	32.86	7.40	25.73	227	0.05
10	7.15	32.862	7.37		30.1	0.15	25.74	30	7.10	32.86	7.35	25.74	226	0.07
15	7.14	32.869	7.41		30.4	0.14	25.75	50	5.70	32.92	7.47	25.97	204	0.11
20	7.15	32.857	7.40		30.3	0.15	25.73							
25	7.13	32.868	7.44		30.0	0.15	25.75							
30	7.10	32.861	7.35		30.4	0.15	25.74							
40	6.72	32.865	7.44		30.5	0.14	25.80							
50	5.70	32.916	7.47		31.2	0.16	25.97							

a) The following nitrate values were obtained for this station: 0 m, 14.0; 27, 14.0; 44, 17.0; 89, 18.1; 135, 30.8; 183, 33.3; 280, 36.8; 498, 41.6; 748, 44.0; 1003, 41.6 µg at/L.
b) Value interpolated graphically.
c) Value interpolated by two-point logarithmic method.
d) Value extrapolated by two-point logarithmic method.

POG

P-59-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
210	CGS ST. CATHARINES; May 22, 1959; 1911 GCT; 50°10'N, 145°00'W; sounding, 2200 fm; wind, 180°, 10 kt; weather, overcast; sea, moderate.													
0	7.70	32.940	7.29				25.72	0	7.70	32.94	7.29	25.72	228	0.00
10	7.49	32.872	7.15				25.70	10	7.49	32.87	7.15	25.70	230	0.02
20	7.30a)	32.880a)	7.15b)				(25.73)	20	7.30	32.88	7.15	25.73	227	0.05
29	7.02	32.885	7.15				25.77	30	6.93	32.89	7.17	25.79	221	0.07
48	5.62	32.916	7.45				25.98	50	5.55	32.92	7.44	25.99	202	0.11
72	4.86	32.944	7.30				26.09	75	4.87	32.95	7.30	26.09	193	0.16
97	4.96	32.988	7.27				26.11	100	4.97	33.04	7.08	26.15	187	0.21
121	5.06	33.384	5.87				26.41	125	5.01	33.45	5.59	26.47	157	0.25
146	4.76	33.762	4.23				26.74	150	4.70	33.77	4.17	26.76	129	0.29
170	4.43	33.816	3.86				26.82	175	4.37	33.82	3.81	26.83	123	0.32
194	4.16	33.818	3.60				26.85	200	4.12	33.82	3.51	26.86	120	0.35
242	3.84	33.849	2.98				26.91	250	3.82	33.86	2.86	26.92	114	0.41
290	3.72	33.894	2.30				26.96	300	3.72	33.91	2.21	26.97	110	0.47
388	3.73	34.037	1.50				27.07	400	3.72	34.05	1.41	27.08	99	0.58
471	3.69	34.145	0.91				27.16	500	3.64	34.17	0.88	27.18	90	0.68
715	3.34	34.294b)	0.73b)				(27.31)	600	3.49	34.23	0,81	27.25	83	0.77
968	2.90	34.402	0.60				27.44	700	3.36	34.29	0.74	27.30	78	0.86
1224	2.59	34.453	0.62				27.51	800	3.18	34.33	0.68	27.36	73	0.94
1480	2.41	34.512	0.71				27.57	1000	2.86	34.41	0.60	27.45	64	1.09
1988	1.96	34.604	1.29				27.68	1200	2.62	34.45	0.62	27.50	59	1.22
2000	1.95c)	34.606c)	1.30c)				(27.68)	1500	2.39	34.52	0.73	27.57	53	1.42
								2000	1.95	34.61	1.30	27.68	42	1.70
211	CGS ST. CATHARINES; May 26, 1959; 1855 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 290°, 7 kt; weather, overcast; sea, slight.													
0	8.10	32.971	7.29	29.4	0.18		25.69	0	8.10	32.97	7.29	25.69	231	0.00
10	8.02	32.867	7.11	28.9	0.16		25.62	10	8.02	32.87	7.11	25.62	238	0.02
20	7.85a)	32.870a)	7.18b)	-	-		(25.65)	20	7.85	32.87	7.18	25.65	235	0.05
30	7.39	32.871	7.24	29.1	0.13		25.71	30	7.39	32.87	7.24	25.71	229	0.07
49	5.63	32.918	7.48	32.8	0.18		25.98	50	5.60	32.92	7.48	25.98	204	0.12
74	5.00	32.920	7.38	34.2	0.21		26.05	75	5.00	32.92	7.39	26.05	197	0.16
89	4.96	32.937	7.55	34.1	0.21		26.07	100	4.95	32.96	7.40	26.09	193	0.21
99	4.95	32.958	7.41	33.8	0.20		26.09	125	5.06	33.38	6.08	26.41	163	0.26
109	4.98	32.970	7.29	32.9	0.20		26.09	150	4.64	33.79	4.23	26.78	128	0.30
119	5.03	33.125	7.18	35.6	0.18		26.21	175	4.37	33.81	3.86	26.82	124	0.33
128	5.07	33.505	5.56	44.9	0.02		26.51	200	4.04	33.81	3.53	26.86	120	0.36
138	4.93	33.747	4.55	54.2	-		26.71	250	3.85	33.86	2.86	26.92	114	0.42
148	4.66	33.790	4.27	58.0	-		26.78	300	3.73	33.93	2.15	26.98	109	0.48
172	4.42	33.810	3.91	64.8	-		26.82							
197	4.05	33.808	3.57	69.8	-		26.86							
246	3.86	33.859	2.92	77.2	-		26.92							
296	3.74	33.924	2.21	86.5	-		26.98							
300	3.73c)	33.929c)	2.15c)	-	-		(26.98)							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; May 29, 1959; 0420 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, missing; weather, fog; sea, calm.

0	8.50	32.933	7.31	25.60	0	8.50	32.93	7.31	25.60	240	0.00
10	8.16	32.857	7.29	25.59	10	8.16	32.86	7.29	25.59	240	0.02
20	7.83	32.864	7.36	25.64	20	7.83	32.86	7.36	25.64	236	0.05
30	6.96	32.857	7.57	25.76	30	6.96	32.86	7.57	25.76	224	0.07
50	5.64	32.892	7.48	25.95	50	5.64	32.89	7.48	25.95	206	0.12
75	4.98	32.940	7.47	26.07	75	4.98	32.94	7.47	26.07	195	0.16
100	4.97	32.966	7.45	26.09	100	4.97	32.97	7.45	26.09	193	0.22
125	5.03	33.191	6.63	26.26	125	5.03	33.19	6.63	26.26	177	0.26
150	4.86	33.729	4.55	26.71	150	4.86	33.73	4.55	26.71	134	0.30
175	4.62	33.794	4.27	26.78	175	4.62	33.79	4.27	26.78	128	0.33
200	4.25	33.780	3.93	26.81	200	4.25	33.78	3.93	26.81	125	0.37
250	3.89	33.820	3.32	26.88	250	3.89	33.82	3.32	26.88	118	0.43
300	3.78	33.910	2.51	26.96	300	3.78	33.91	2.51	26.96	110	0.49
500	3.66	34.135	0.97	27.15	400	3.71	34.04	1.65	27.07	100	0.60
750	3.28	34.285	0.67	27.31	500	3.66	34.14	0.97	27.15	92	0.70
1000	2.88	34.386	0.63	27.43	600	3.49	34.20	0.84	27.23	85	0.80
1250	2.56	34.458	0.63	27.51	700	3.34	34.26	0.73	27.28	90	0.88
					800	3.19	34.31	0.66	27.34	74	0.96
					1000	2.88	34.39	0.63	27.43	66	1.12
					1200	2.62	34.44	0.63	27.50	59	1.26

CGS ST. CATHARINES; May 29, 1959; 1957 GCT; 49°50'N, 142°10'W; sounding, missing; wind, 200°, 12 kt; weather, overcast; sea, slight.

6

0	9.20	32.785	7.21	25.38	0	9.20	32.78	7.21	25.38	260	0.00
10	8.70	32.773	7.15	25.44	10	8.70	32.77	7.15	25.44	255	0.03
20	8.43	32.766	7.22	25.48	20	8.43	32.77	7.22	25.48	251	0.05
30	7.54	32.846	7.63	25.67	30	7.54	32.85	7.63	25.67	233	0.08
50	6.59	32.894	7.43	25.84	50	6.59	32.89	7.43	25.84	217	0.12
75	5.92	32.929	7.52	25.95	75	5.92	32.93	7.52	25.95	206	0.18
100	5.72	32.960	7.38	26.00	100	5.72	32.96	7.38	26.00	202	0.23
124	5.64	32.982	7.16	26.03	125	5.64	33.01	7.08	26.05	197	0.28
149	5.63	33.594	5.39	26.51	150	5.62	33.60	5.34	26.52	152	0.32
174	5.32	33.762	4.23	26.68	175	5.29	33.76	4.23	26.68	137	0.36
199	4.72	33.792	4.26	26.77	200	4.71	33.79	4.23	26.77	128	0.39
248	4.24	33.829	3.36	26.85	250	4.23	33.83	3.30	26.86	120	0.46
297	4.06	33.892	2.22	26.92	300	4.05	33.90	2.20	26.93	113	0.52
468	3.76	34.055	1.28	27.08	400	3.86	34.00	1.60	27.03	104	0.63
711	3.48	34.237	0.71	27.25	500	3.72	34.08	1.19	27.11	96	0.73
954	2.98	34.356	1.22	27.40	600	3.59	34.16	0.94	27.18	90	0.83
1199	2.60	34.441	1.22	27.50	700	3.49	34.23	0.73	27.25	83	0.92
1200	2.60a)	34.441a)	1.22a)	(27.50)	800	3.28	34.28	0.91	27.31	77	1.01
					1000	2.90	34.37	1.22	27.42	67	1.17
					1200	2.60	34.44	1.22	27.50	59	1.31

CGS ST. CATHARINES; May 30, 1959; 0518 GCT; 49°33'N, 139°30'W; sounding, missing; wind, 150°, 10 kt; weather, overcast; sea, moderate.

5

0	9.00	32.847	7.17	25.46	0	9.00	32.85	7.17	25.46	253	0.00
10	9.00	32.720	7.16	25.36	10	9.00	32.72	7.16	25.36	262	0.03
20	8.28	32.755	7.27	25.49	20	8.28	32.76	7.27	25.49	250	0.05
30	7.22	32.777	7.62	25.66	30	7.22	32.78	7.62	25.66	234	0.08
50	6.46	32.806	7.55	25.79	50	6.46	32.81	7.55	25.79	222	0.12
74	5.91	32.850	7.37	25.89	75	5.88	32.85	7.37	25.89	212	0.18
99	5.32	32.886	7.32	25.99	100	5.34	32.90	7.28	25.99	202	0.23
124	5.75	33.143	6.23	26.14	125	5.76	33.16	6.16	26.15	187	0.28
148	5.96	33.536	4.86	26.42	150	5.95	33.55	4.82	26.44	160	0.32
173	5.89	33.721	4.35	26.58	175	5.85	33.73	4.35	26.59	146	0.36
198	5.43	33.787	4.37	26.69	200	5.42	33.79	4.32	26.69	136	0.40
248	5.11	33.847	3.30	26.77	250	5.09	33.85	3.27	26.77	128	0.47
298	4.69	33.884	2.64	26.85	300	4.67	33.88	2.62	26.85	121	0.53
300	4.67a)	33.885a)	2.62a)	(26.85)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
4	CGS ST. CATHARINES; May 30, 1959; 1517 GCT; 49°23'N, 136°41'W; sounding, missing; wind, 210°, 20 kt; weather, cloudy; sea, moderate.													
0	9.50	32.712	7.07				25.27	0	9.50	32.71	7.07	25.27	271	0.00
10	9.32	32.683	7.13				25.28	10	9.32	32.68	7.13	25.28	270	0.03
20	9.08	32.710	7.09				25.34	20	9.08	32.71	7.09	25.34	264	0.05
30	8.80	32.739	7.45				25.40	30	8.80	32.74	7.45	25.40	259	0.08
50	8.36	32.744	7.29				25.47	50	8.36	32.74	7.29	25.47	252	0.13
74	7.77	32.763	7.32				25.57	75	7.75	32.77	7.32	25.58	242	0.20
99	7.33	32.823	7.20				25.68	100	7.31	32.82	7.19	25.69	231	0.25
124	6.91	32.852	7.01				25.76	125	6.90	32.87	6.97	25.78	222	0.31
149	6.71	33.185	6.05				26.05	150	6.70	33.20	6.03	26.07	195	0.36
173	6.44	33.600	5.47				26.41	175	6.38	33.61	5.43	26.43	161	0.41
198	5.69	33.735	5.01				26.61	200	5.67	33.74	4.98	26.62	143	0.45
248	5.30	33.814	4.42				26.72	250	5.28	33.82	4.37	26.73	132	0.52
297	4.80	33.882	3.16				26.83	300	4.77	33.89	3.09	26.84	122	0.59
300	4.77a)	33.886a)	3.09a)				(26.84)							
3	CGS ST. CATHARINES; May 30, 1959; 2339 GCT; 49°03'N, 134°03'W; sounding, missing; wind, 190°, 10 kt; weather, overcast; sea, moderate.													
0	10.00	32.602	7.26				25.10	0	10.00	32.60	7.26	25.10	287	0.00
10	9.28	32.551	7.12				25.18	10	9.28	32.55	7.12	25.18	280	0.03
20	8.87	32.598	7.17				25.28	20	8.87	32.60	7.17	25.28	270	0.06
29	8.70	32.539	7.20				25.26	30	8.64	32.54	7.21	25.27	271	0.08
49	7.77	32.558	7.37				25.41	50	7.72	32.56	7.36	25.42	257	0.14
73	6.78	32.659	7.22				25.63	75	6.75	32.67	7.20	25.64	236	0.20
98	6.40	32.784	6.96				25.78	100	6.39	32.80	6.89	25.79	222	0.26
123	6.34	32.997	6.17				25.95	125	6.35	33.04	6.03	25.99	202	0.31
147	6.43	33.511	4.52				26.34	150	6.42	33.54	4.45	26.37	166	0.36
172	6.33	33.704	3.95				26.51	175	6.31	33.72	3.92	26.52	152	0.40
196	6.15	33.792	3.71				26.60	200	6.12	33.80	3.62	26.61	144	0.44
246	5.86	33.910	2.67				26.73	250	5.80	33.91	2.64	26.74	131	0.51
296	5.18	33.921	2.42				26.82	300	5.15	33.93	2.37	26.83	123	0.57
394	4.53	34.023	1.50				26.98	400	4.51	34.03	1.46	26.98	109	0.69
494	4.18	34.094	0.91				27.07	500	4.16	34.10	0.90	27.08	99	0.80
744	3.64	34.289	0.45				27.28	600	3.92	34.19	0.69	27.17	91	0.90
								700	3.72	34.26	0.52	27.25	83	1.00
2	CGS ST. CATHARINES; May 31, 1959; 0824 GCT; 49°00'N, 131°10'W; sounding, missing; wind, light airs; weather, overcast; sea, calm.													
0	9.50	32.611	7.16				25.19	0	9.50	32.61	7.16	25.19	279	0.00
10	9.62	32.554	6.96				25.13	10	9.62	32.55	6.96	25.13	284	0.03
20	9.40	32.568	6.94				25.17	20	9.40	32.57	6.94	25.17	280	0.06
30	9.16	32.566	7.12				25.21	30	9.16	32.57	7.12	25.21	277	0.08
50	8.47	32.607	7.20				25.35	50	8.47	32.61	7.20	25.35	263	0.14
74	7.26	32.634	7.22				25.54	75	7.24	32.64	7.20	25.55	244	0.20
99	6.77	32.696	6.84				25.66	100	6.77	32.72	6.80	25.67	233	0.26
124	6.74	33.144	5.76				26.01	125	6.72	33.16	5.73	26.03	199	0.32
149	6.37	33.529	5.32				26.37	150	6.36	33.54	5.32	26.37	166	0.36
173	6.22	33.717	5.20				26.53	175	6.20	33.72	5.12	26.54	150	0.41
198	5.99	33.790	4.33				26.62	200	5.97	33.79	4.29	26.63	142	0.44
248	5.54	33.863	3.27b)				26.73	250	5.52	33.87	3.24	26.74	131	0.51
298	5.17	33.927	2.40				26.83	300	5.16	33.93	2.37	26.83	123	0.58
479	4.33	34.090	0.96				27.05	400	4.65	34.03	1.51	26.97	110	0.70
719	3.82	34.267	0.43				27.24	500	4.28	34.11	0.91	27.07	100	0.81
977	3.18	34.368	0.45				27.39	600	4.05	34.19	0.66	27.16	92	0.91
1217	2.73	34.449	0.55				27.49	700	3.85	34.26	0.46	27.23	85	1.01
								800	3.60	34.30	0.44	27.29	79	1.10
								1000	3.13	34.38	0.46	27.40	69	1.26
								1200	2.76	34.44	0.54	27.48	61	1.40

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; May 31, 1959; 1920 GCT; 48°50'N, 128°00'W; sounding, missing; wind, 320°, 5 kt; weather, partly cloudy; sea, slight.														1
0	10.90	32.556	6.92				24.91	0	10.90	32.56	6.92	24.91	305	0.00
10	10.51	32.500	6.87				24.94	10	10.51	32.50	6.87	24.94	302	0.03
20	10.32	32.509	6.81				24.98	20	10.32	32.51	6.81	24.98	299	0.06
30	10.22	32.534	6.97				25.01	30	10.22	32.53	6.97	25.01	296	0.09
50	9.00	32.534	7.13				25.21	50	9.00	32.53	7.13	25.21	277	0.15
74	8.10	32.576	7.09				25.38	75	8.07	32.59	7.04	25.39	260	0.22
99	7.44	32.825	6.18				25.67	100	7.46	32.86	6.08	25.69	231	0.28
123	7.94	33.474	4.04				26.11	125	7.92	33.49	4.00	26.12	190	0.33
148	7.68	33.688	3.54				26.31	150	7.66	33.70	3.53	26.32	171	0.38
173	7.39	33.789	3.36				26.43	175	7.37	33.80	3.34	26.44	160	0.42
197	7.16	33.866	3.16				26.53	200	7.13	33.87	3.15	26.53	151	0.46
247	6.68	33.927	3.06				26.64	250	6.66	33.93	3.00	26.64	141	0.54
297	6.41	33.979	2.24				26.72	300	6.38	33.98	2.22	26.72	133	0.61
471	5.05	34.064	1.13				26.95	400	5.53	34.03	1.52	26.87	119	0.74
705	4.06	34.222	0.50				27.18	500	4.90	34.09	1.04	26.99	108	0.86
956	3.64	34.383	0.35				27.35	600	4.46	34.16	0.75	27.09	98	0.97
1198	3.03	34.457	0.47				27.47	700	4.08	34.22	0.52	27.18	90	1.07
1200	3.03a)	34.458a)	0.47a)				(27.47)	800	3.89	34.29	0.44	27.25	83	1.16
								1000	3.52	34.40	0.37	27.38	71	1.33
								1200	3.03	34.46	0.47	27.47	62	1.48
CGS ST. CATHARINES; July 8, 1959; 0733 GCT; 48°48'N, 128°00'W; sounding, 1500 fm; wind, light airs; weather, overcast; sea, slight.														1
0	13.60	32.591					24.43	0	13.60	32.59		24.43	351	0.00
10	12.98	32.461					24.45	10	12.98	32.46		24.45	349	0.04
20	12.65	32.508					24.55	20	12.65	32.51		24.55	340	0.07
30	11.00	32.492					24.85	30	11.00	32.49		24.85	311	0.10
50	9.26	32.600					25.22	50	9.26	32.60		25.22	276	0.16
75	7.74	32.635					25.48	75	7.74	32.64		25.48	251	0.23
100	7.39	32.887					25.72	100	7.39	32.89		25.72	228	0.29
125	7.08	33.339					26.12	125	7.08	33.34		26.12	190	0.34
150	6.79	33.625					26.39	150	6.79	33.62		26.39	164	0.39
200	6.68	33.927					26.64	175	6.73	33.79		26.52	152	0.43
250	6.25	33.987					26.74	200	6.68	33.93		26.64	141	0.47
305	5.91	34.017					26.81	250	6.25	33.99		26.74	131	0.54
487	5.01	34.123					27.00	300	5.94	34.01		26.80	126	0.60
733	4.08	34.296					27.24	400	5.39	34.08		26.92	114	0.73
980	3.45	34.413					27.40	500	4.95	34.13		27.02	105	0.84
1227	2.87	34.488					27.51	600	4.54	34.21		27.12	95	0.95
								700	4.19	34.28		27.21	87	1.05
								800	3.89	34.33		27.29	79	1.14
								1000	3.40	34.42		27.41	68	1.30
								1200	2.93	34.48		27.50	59	1.45

a) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
2	CGS ST. CATHARINES; July 8, 1959; 1905 GCT; 49°01'N, 131°11'W; sounding, 1300 fm; wind, 180°, 8 kt; weather, cloudy; sea, moderate.													
0	12.50	32.735					24.76	0	12.50	32.74		24.76	320	0.00
10	11.76	32.528					24.74	10	11.76	32.53		24.74	321	0.03
19	11.79	32.529					24.73	20	11.69	32.53		24.75	320	0.06
29	10.93	32.549					24.90	30	10.75	32.55		24.94	302	0.10
48	8.17	32.632					25.41							
72	7.01	32.738					25.66							
500	4.19	34.139					27.10							
750	3.62	34.322					27.31							
970	3.05	34.417					27.44							
1250	2.63	34.503					27.54							
								500	4.19	34.14		27.10	97	0.85
								600	3.93	34.22		27.20	88	0.94
								700	3.72	34.29		27.27	81	1.04
								800	3.48	34.35		27.34	74	1.12
								1000	3.00	34.43		27.45	64	1.27
								1200	2.70	34.49		27.53	56	1.41
3	CGS ST. CATHARINES; July 9, 1959; 0533 GCT; 49°16'N, 134°00'W; sounding, 1907 fm; wind, 180°, 10 kt; weather, intermittent slight drizzle; sea, moderate.													
0	11.60	32.684					24.89	0	11.60	32.68		24.89	307	0.00
10	11.59	32.625					24.84	10	11.59	32.62		24.84	312	0.03
20	11.56	32.640					24.86	20	11.56	32.64		24.86	310	0.06
30	11.12	32.682					24.97	30	11.12	32.68		24.97	300	0.09
50	8.02	32.652					25.45	50	8.02	32.65		25.45	254	0.15
75	7.34	32.750					25.62	75	7.34	32.75		25.62	238	0.21
99	6.99	32.935					25.82	100	6.98	32.95		25.83	218	0.27
124	6.77	33.353a)					(26.18)	125	6.77	33.37		26.19	184	0.32
149	6.70b)	33.700b)					(26.46)	150	6.69	33.71		26.46	158	0.36
174	6.39	33.835					26.60	175	6.38	33.84		26.61	144	0.40
199	6.23	33.922					26.69	200	6.22	33.92		26.70	135	0.44
248	5.84	33.952					26.77	250	5.82	33.95		26.77	128	0.51
297	5.48	33.992					26.84	300	5.46	34.00		26.85	121	0.57
481	4.42	34.126					27.07	400	4.83	34.08		26.98	109	0.69
723	3.63	34.299					27.29	500	4.35	34.14		27.09	98	0.80
966	3.12	34.398					27.42	600	3.99	34.22		27.19	89	0.90
1210	2.69	34.474					27.52	700	3.69	34.28		27.27	81	0.99
								800	3.45	34.33		27.33	75	1.07
								1000	3.05	34.41		27.43	66	1.23
								1200	2.71	34.47		27.51	58	1.37

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; July 9, 1959; 1521 GCT; 49°27'N, 136°42'W; sounding, 2000 fm; wind, 140°, 13 kt; weather, moderate rain; sea, rough. 4

0	11.40	32.685	24.92	0	11.40	32.68	24.92	304	0.00
9	11.03	32.658	24.97	10	11.03	32.66	24.97	300	0.03
19	11.05	32.645	24.96	20	11.05	32.64	24.96	300	0.06
29	11.05	32.643	24.95	30	10.99	32.65	24.97	300	0.09
48	10.07	32.703	25.17	50	9.83	32.71	25.22	276	0.15
72	7.62	32.789	25.62	75	7.53	32.81	25.64	236	0.21
97	6.97	32.935	25.82	100	6.93	32.98	25.86	215	0.27
121	6.70	33.246	26.10	125	6.64	33.31	26.16	186	0.32
145	6.39	33.600	26.42	150	6.33	33.64	26.46	158	0.37
168	6.14	33.773	26.59	175	6.04	33.79	26.62	143	0.40
191	5.81	33.835	26.68	200	5.68	33.85	26.70	135	0.44
235	5.20	33.885	26.79	250	5.17	33.91	26.81	125	0.51
284	5.12	33.954	26.85	300	5.02	33.97	26.88	118	0.57
390	4.51	34.041	26.99	400	4.47	34.05	27.00	107	0.69
592	3.91	34.211	27.19	500	4.15	34.14	27.11	96	0.79
835	3.41	34.336	27.34	600	3.89	34.22	27.20	88	0.89
1020	2.97	34.434	27.46	700	3.67	34.27	27.26	82	0.98
				800	3.47	34.32	27.32	76	1.07
				1000	3.01	34.42	27.45	64	1.22

CGS ST. CATHARINES; July 10, 1959; 0200 GCT; 49°38'N, 139°30'W; sounding, 2200 fm; wind, 140°, 24 kt; weather, intermittent slight drizzle; sea, rough. 5

0	10.90	32.952	25.22	0	10.90	32.95	25.22	276	0.00
10	10.52	32.692	25.09	10	10.52	32.69	25.09	288	0.03
20	10.63	32.686	25.06	20	10.63	32.69	25.06	291	0.06
29	10.61	32.691	25.07	30	10.46	32.70	25.10	287	0.09
49	8.12	32.808	25.56	50	8.04	32.81	25.57	242	0.14
73	6.48	32.904	25.86	75	6.46	32.92	25.87	214	0.20
98	6.29	33.031	25.98	100	6.29	33.06	26.01	201	0.25
123	6.28	33.377	26.26	125	6.25	33.40	26.28	175	0.30
147	6.00	33.683	26.53	150	5.93	33.70	26.56	148	0.34
172	5.48	33.810	26.70	175	5.44	33.81	26.71	134	0.38
197	5.17	33.831a)	(26.75)	200	5.14	33.83	26.76	129	0.41
247	4.69	33.866	26.83	250	4.67	33.87	26.84	122	0.47
295	4.39	33.935	26.92	300	4.38	33.94	26.93	113	0.54
490	4.02	34.139	27.12	400	4.17	34.06	27.04	103	0.65
750	3.39	34.310	27.32	500	3.99	34.15	27.13	94	0.75
1023	2.96	34.429	27.46	600	3.72	34.22	27.22	86	0.85
1273	2.59	34.484	27.53	700	3.49	34.28	27.29	79	0.94
				800	3.30	34.34	27.35	74	1.02
				1000	2.99	34.42	27.45	64	1.17
				1200	2.69	34.47	27.51	58	1.31

a) Value interpolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
6	CGS ST. CATHARINES; July 10, 1959; 1150 GCT; 49°48'N, 142°10'W; sounding, 2200 fm; wind, 160°, 19 kt; weather, overcast; sea, moderate.													
0	10.60	32.816					25.17	0	10.60	32.82		25.17	280	0.00
9	10.56	32.780					25.15	10	10.56	32.78		25.15	282	0.03
19	10.58	32.787					25.15	20	10.58	32.79		25.15	282	0.06
28	10.59	32.790					25.15	30	10.43	32.80		25.18	280	0.08
48	9.24	32.854					25.42	50	8.93	32.86		25.48	251	0.14
72	6.10	32.957					25.95	75	6.04	32.97		25.97	204	0.20
86	5.84	33.017					26.03	100	5.87	33.17		26.14	188	0.25
119	5.90	33.344					26.28	125	5.88	33.46		26.38	166	0.29
142	5.82	33.769					26.62	150	5.59	33.79		26.67	138	0.33
165	5.20	33.816					26.74	175	5.06	33.82		26.76	129	0.36
188	4.89	33.831					26.78	200	4.72	33.84		26.81	125	0.40
232	4.32	33.861					26.87	250	4.25	33.88		26.89	117	0.46
278	4.14	33.898					26.92	300	4.11	33.93		26.95	111	0.52
429	3.97	34.074					27.08	400	4.00	34.04		27.05	102	0.63
612	3.54	34.252					27.26	500	3.78	34.15		27.15	92	0.73
857	3.15	34.367					27.39	600	3.56	34.24		27.25	83	0.82
1007	2.70	34.463					27.51	700	3.38	34.30		27.31	77	0.91
								800	3.23	34.34		27.36	73	0.99
								1000	2.72	34.46		27.50	59	1.14
301	CGS ST. CATHARINES; July 11, 1959; 0052 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 190°, 13 kt; weather, overcast; sea, moderate.													
0	10.90	32.914	a)	a)	a)	a)	25.19	0	10.90	32.91		25.19	279	0.00
9	10.30	32.835					25.23	10	10.30	32.84		25.23	275	0.03
19	10.29	32.838					25.24	20	10.29	32.84		25.24	274	0.06
28	10.27	32.833					25.24	30	9.77	32.85		25.33	265	0.08
47	6.32	32.960					25.92	50	6.17	32.96		25.95	206	0.13
72	5.28	32.986					26.07	75	5.22	32.99		26.08	194	0.18
96	4.85	33.013u					26.14	100	4.81	33.01		26.14	188	0.23
120	4.64	32.997u					26.15	125	4.74	33.15		26.26	177	0.28
144	5.07	33.684					26.65	150	4.98	33.72		26.69	136	0.32
168	4.72	33.827					26.80	175	4.63	33.83		26.81	125	0.35
192	4.43	33.828					26.83	200	4.35	33.83		26.84	122	0.38
241	3.99	33.861					26.90	250	3.96	33.87		26.92	114	0.44
291	3.83	33.913					26.96	300	3.83	33.92		26.97	110	0.50
455	3.79	34.032					27.06	400	3.80	34.00		27.03	104	0.61
682	3.44	34.269					27.28	500	3.71	34.09		27.11	96	0.71
909	2.98	34.374					27.41	600	3.55	34.19		27.21	87	0.81
1135	2.67	34.454					27.50	700	3.40	34.28		27.29	79	0.90
								800	3.18	34.33		27.35	74	0.98
								1000	2.85	34.41		27.45	64	1.13

a) Nutrient profile casts were taken in conjunction with Stations 301, 303, 305, 307, 309, 311 and 313. The oxygen, pnosphate, silicate and nitrite data obtained on these casts are reported in report No. 55 of the POG Manuscript Report Series, pages 13-16.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; July 14, 1959; 1956 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 260°, 19 kt; weather, squalls; sea, very rough. 302

0	11.00	33.023	6.46	25.26	0	11.00	33.02	6.46	25.26	272	0.00
10	10.49	32.816	6.48	25.19	10	10.49	32.82	6.48	25.19	279	0.03
19	10.46	32.822	6.50	25.20	20	10.46	32.82	6.50	25.20	278	0.06
29	10.46	32.819	6.50	25.19	30	10.25	32.83	6.53	25.23	275	0.08
48	7.19	32.924	6.94	25.78	50	6.98	32.93	6.94	25.81	220	0.13
73	5.02	32.991	7.00	26.10	75	4.99	32.99	7.00	26.11	191	0.18
97	4.72	33.001	6.98	26.15	100	4.77	33.03	6.88	26.16	186	0.23
122	5.11	33.219	6.22	26.27	125	5.12	33.29	5.98	26.33	170	0.28
147	5.20	33.782	4.41	26.71	150	5.16	33.79	4.37	26.72	133	0.32
172	4.85	33.828	4.10	26.79	175	4.82	33.83	4.07	26.79	127	0.35
198	4.59	33.827	3.84	26.81	200	4.57	33.83	3.81	26.82	124	0.38
250	4.05	33.856	3.10	26.89	250	4.05	33.86	3.10	26.89	117	0.44
296	3.86	33.918	2.32	26.96	300	3.86	33.92	2.28	26.97	110	0.50
488	3.79	34.156	0.99	27.16	400	3.82	34.06	1.52	27.08	99	0.61
738	3.30	34.317	0.71	27.33	500	3.76	34.16	0.97	27.17	91	0.71
996	2.85	34.411	0.64	27.45	600	3.55	34.24	0.85	27.25	83	0.80
1494	2.37	34.529	0.76	27.59	700	3.36	34.30	0.74	27.31	77	0.89
1935	1.96	34.607	1.29	27.68	800	3.18	34.34	0.68	27.37	72	0.97
					1000	2.85	34.41	0.64	27.45	64	1.12
					1200	2.63	34.46	0.69	27.51	58	1.26
					1500	2.36	34.53	0.77	27.59	51	1.44

CGS ST. CATHARINES; July 17, 1959; 1852 GCT; 49°50'N, 145°16'W; sounding, 2200 fm; wind, 110°, 5 kt; weather, fog; sea, slight. 303

0	10.90	32.822	25.12	0	10.90	32.82	25.12	285	0.00
10	10.51	32.734	25.12	10	10.51	32.73	25.12	285	0.03
20	10.41	32.776	25.17	20	10.41	32.78	25.17	280	0.06
30	10.18	32.805	25.23	30	10.18	32.80	25.23	275	0.08
50	5.70	32.982	26.02	50	5.70	32.98	26.02	200	0.13
75	4.98	32.999	26.12	75	4.98	33.00	26.12	190	0.18
100	4.98	33.050	26.16	100	4.98	33.05	26.16	186	0.23
124	5.07	33.741	26.69	125	5.05	33.74	26.70	135	0.27
149	4.69	33.816	26.79	150	4.68	33.82	26.80	126	0.30
174	4.35	33.831	26.84	175	4.34	33.83	26.84	122	0.34
199	4.10	33.843	26.88	200	4.09	33.84	26.88	118	0.37
248	3.85	33.885	26.94	250	3.85	33.89	26.94	112	0.43
300	3.74	33.945	27.00	300	3.74	33.94	27.00	107	0.48

CGS ST. CATHARINES; July 21, 1959; 1854 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 240°, 8 kt; weather, patches of shallow fog; sea, moderate. 304

0	11.40	32.878	6.47	25.07	0	11.40	32.88	6.47	25.07	290	0.00
9	11.16	32.785	6.57	25.05	10	11.15	32.78	6.57	25.05	292	0.03
19	11.11	32.785	6.56	25.05	20	11.02	32.79	6.55	25.07	290	0.06
27	10.49	32.812	6.52	25.18	30	9.68	32.84	6.62	25.34	264	0.09
48	5.82	32.989	7.10	26.01	50	5.72	32.99	7.09	26.02	200	0.13
71	4.84	33.003	7.00	26.13	75	5.00	33.00	6.99	26.12	190	0.18
95	5.69	33.005	6.91	26.04	100	5.55	33.14	6.51	26.16	186	0.23
119	5.07	33.584	5.12	26.57	125	5.03	33.65	4.86	26.62	143	0.27
143	4.92	33.815	4.17	26.77	150	4.78	33.82	4.04	26.78	128	0.31
166	4.49	33.815	3.76	26.82	175	4.38	33.82	3.62	26.84	122	0.34
192	4.18	33.844	3.37	26.87	200	4.13	33.85	3.26	26.88	118	0.37
240	3.91	33.869	2.73	26.92	250	3.88	33.89	2.59	26.93	113	0.43
288	3.77	33.943	2.08	26.99	300	3.77	33.96	1.98	27.00	107	0.48
381	3.79	34.055	1.36	27.08	400	3.79	34.07	1.27	27.09	98	0.59
478	3.78	34.142	0.95	27.15	500	3.73	34.16	0.92	27.17	91	0.69
736	3.31	34.289	0.65	27.31	600	3.53	34.22	0.80	27.23	85	0.78
974	2.89	34.393	0.59	27.43	700	3.36	34.27	0.68	27.29	79	0.87
1224	2.54	34.463	0.60	27.52	800	3.19	34.32	0.64	27.35	74	0.95
					1000	2.85	34.40	0.59	27.44	65	1.10
					1200	2.57	34.46	0.60	27.51	58	1.24

	OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
305	CGS ST. CATHARINES; July 24, 1959; 1901 GCT; 50°00'N, 145°16'W; sounding, 2200 fm; wind, 270°, 13 kt; weather, partly cloudy; sea, rough.														
	0	11.20	33.122	6.55				25.30	0	11.20	33.12	6.55	25.30	268	0.00
	5	11.23	32.797	6.61				25.04	10	11.21	32.78	6.59	25.03	294	0.03
	10	11.21	32.779	6.59				25.03	20	11.21	32.79	6.54	25.04	293	0.06
	20	11.21	32.788	6.54				25.04	30	10.76	32.76	6.64	25.10	287	0.09
	30	10.76	32.763	6.64				25.10	50	7.10	32.88	7.07	25.76	224	0.14
	40	9.52	32.794	6.76				25.33	75	4.62	32.98	7.10	26.14	188	0.19
	49	7.29	32.874	7.07				25.73	100	4.49	33.08	6.94	26.23	180	0.24
	59	5.56	32.943	7.11				26.00	125	4.75	33.58	5.01	26.60	145	0.28
	68	4.65	32.981	7.10				26.14	150	4.83	33.83	4.03	26.79	127	0.31
	83	4.58	32.982	7.11				26.15	175	4.39	33.86	3.68	26.86	120	0.34
	98	4.47	33.057	7.07				26.22	200	4.13	33.87	3.30	26.90	116	0.38
	113	4.62	33.217	6.23				26.33	250	3.88	33.91	2.64	26.95	111	0.43
	123	4.74	33.552	5.10				26.58							
	147	4.89	33.826	4.08				26.78							
	172	4.43	33.855	3.73				26.85							
	196	4.15	33.865	3.36				26.89							
	245	3.89	33.903	2.71				26.95							
	294	3.79	33.940	2.06				26.99							
306	CGS ST. CATHARINES; July 28, 1959; 1955 GCT; 50°00'N, 145°16'W; sounding, 2200 fm; wind, 160°, 14 kt; weather, fog; sea, rough.														
	0	12.50	32.966	6.51				24.94	0	12.50	32.97	6.51	24.94	302	0.00
	10	11.77	32.780	6.64				24.93	10	11.77	32.78	6.64	24.93	303	0.03
	20	11.39	32.772	6.70				24.99	20	11.39	32.77	6.70	24.99	298	0.06
	30	10.90	32.765	6.78				25.08	30	10.90	32.76	6.78	25.08	289	0.09
	50	5.93	32.955	7.13				25.97	50	5.93	32.96	7.13	25.97	204	0.14
	75	4.77	32.982	7.08				26.13	75	4.77	32.98	7.08	26.13	189	0.19
	100	4.54	32.985	7.06				26.15	100	4.54	32.98	7.06	26.15	187	0.24
	125	4.91	33.321	5.90				26.38	125	4.91	33.32	5.90	26.38	166	0.28
	150	4.98	33.780	4.23				26.73	150	4.98	33.78	4.23	26.73	132	0.32
	175	4.60	33.827	3.86				26.81	175	4.60	33.83	3.86	26.81	125	0.35
	200	4.39	33.831	3.66				26.84	200	4.39	33.83	3.66	26.84	122	0.38
	250	4.00	33.858	3.05				26.90	250	4.00	33.86	3.05	26.90	116	0.45
	300	3.79	33.921	2.37				26.97	300	3.79	33.92	2.37	26.97	110	0.50
	500	3.73	34.171	0.92				27.18	400	3.76	34.06	1.56	27.09	98	0.61
	750	3.30	34.309	0.64				27.33	500	3.73	34.17	0.92	27.18	90	0.71
	1005	2.83	34.420	0.63				27.46	600	3.54	34.23	0.80	27.24	84	0.80
	1250	2.60	34.472	0.63				27.52	700	3.37	34.28	0.68	27.30	78	0.89
									800	3.20	34.33	0.64	27.36	73	0.97
									1000	2.84	34.42	0.63	27.46	63	1.12
									1200	2.64	34.46	0.63	27.51	58	1.26
307	CGS ST. CATHARINES; July 31, 1959; 1900 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 260°, 8 kt; weather, cloudy; sea, rough.														
	0	11.50	32.839					25.03	0	11.50	32.84		25.03	294	0.00
	10	11.52	32.751					24.95	10	11.52	32.75		24.95	301	0.03
	20	11.52	32.753					24.96	20	11.52	32.75		24.96	300	0.06
	30	11.52	32.748					24.95	30	11.52	32.75		24.95	301	0.09
	50	7.93	32.912					25.67	50	7.93	32.91		25.67	233	0.14
	75	4.94	33.005					26.12	75	4.94	33.00		26.12	190	0.20
	100	4.78	33.052					26.18	100	4.78	33.05		26.18	184	0.25
	125	5.10	33.594					26.57	125	5.10	33.59		26.57	148	0.29
	150	4.97	33.803					26.75	150	4.97	33.80		26.75	130	0.32
	175	4.58	33.821					26.81	175	4.58	33.82		26.81	125	0.36
	200	4.35	33.844					26.85	200	4.35	33.84		26.85	121	0.39
	250	4.05	33.868					26.90	250	4.05	33.87		26.90	116	0.45
	300	3.84	33.929					26.97	300	3.84	33.93		26.97	110	0.50

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; August 4, 1959; 1856 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 170°, 13 kt; weather, moderate rain; sea, rough.														308
0	12.00	32.806	6.41				24.91	0	12.00	32.81	6.41	24.91	305	0.00
10	11.93	32.765	6.40				24.89	10	11.93	32.76	6.40	24.89	307	0.03
19	11.90	32.784	6.44				24.91	20	11.89	32.78	6.44	24.91	305	0.06
28	11.81	32.793	6.45				24.93	30	11.19	32.81	6.55	25.06	291	0.09
47	6.93	32.952	7.21				25.84	50	6.69	32.96	7.19	25.88	213	0.14
72	5.22	32.994	7.02				26.08	75	5.17	33.00	7.02	26.09	193	0.19
95	4.88	33.018	7.01				26.14	100	4.92	33.06	6.85	26.17	185	0.24
119	5.06	33.204	6.34				26.27	125	5.13	33.34	5.91	26.37	166	0.29
139	5.29	33.637	4.97				26.58	150	5.12	33.73	4.80	26.68	137	0.32
162	4.95	33.822	4.63				26.77	175	4.78	33.83	4.19	26.79	127	0.36
185	4.65	33.833	3.88				26.81	200	4.49	33.84	3.66	26.84	122	0.39
232	4.18	33.862	3.25				26.89	250	4.05	33.88	2.93	26.91	115	0.45
278	3.86	33.907	2.49				26.95							
CGS ST. CATHARINES; August 7, 1959; 1852 GCT; 50°00'N, 144°44'W; sounding, 2200 fm; wind, 230°, 5 kt; weather, cloudy; sea, moderate.														309
0	11.70	32.890					25.03	0	11.70	32.89		25.03	294	0.00
10	11.49	32.763					24.97	10	11.49	32.76		24.97	300	0.03
20	11.46	32.768					24.98	20	11.46	32.77		24.98	299	0.06
30	11.45	32.777					24.99	30	11.45	32.78		24.99	298	0.09
50	6.48	32.925					25.88	50	6.48	32.92		25.88	213	0.14
75	5.71	32.982					26.02	75	5.71	32.98		26.02	200	0.19
100	5.46	32.991					26.05	100	5.46	32.99		26.05	197	0.24
125	5.54	33.542					26.48	125	5.54	33.54		26.48	156	0.29
150	5.54	33.733					26.63	150	5.54	33.73		26.63	142	0.33
175	5.03	33.828					26.77	175	5.03	33.83		26.77	128	0.36
200	4.69	33.828					26.80	200	4.69	33.83		26.80	126	0.39
250	4.18	33.855					26.88	250	4.18	33.86		26.88	118	0.46
300	3.92	33.900					26.94	300	3.92	33.90		26.94	112	0.52
CGS ST. CATHARINES; August 11, 1959; 1848 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 160°, 5 kt; weather, overcast; sea, slight.														310
0	12.00	33.012	6.34				25.07	0	12.00	33.01	6.34	25.07	290	0.00
10	12.00	32.854a)	6.36				(24.94)	10	12.00	32.85	6.36	24.94	302	0.03
20	11.91	32.761	6.45				24.89	20	11.91	32.76	6.45	24.89	307	0.06
30	11.84	32.766	6.41				24.91	30	11.84	32.77	6.41	24.91	305	0.09
50	11.69	32.773	6.55				24.94	50	11.69	32.77	6.55	24.94	302	0.15
75	5.50	32.993	7.01				26.05	75	5.50	32.99	7.01	26.05	197	0.22
100	4.79	33.000	7.00				26.14	100	4.79	33.00	7.00	26.14	188	0.26
125	5.31	33.500	5.35				26.47	125	5.31	33.50	5.35	26.47	157	0.31
160	5.04	33.796	4.18				26.74	150	5.11	33.72	4.49	26.67	138	0.35
185	4.64	33.823	3.89				26.81	175	4.79	33.81	4.00	26.78	128	0.38
210	4.32	33.830	3.58				26.85	200	4.44	33.83	3.70	26.83	123	0.41
260	3.97	33.882	2.71				26.92	250	4.03	33.87	2.87	26.91	115	0.47
300	3.83	33.943	2.20				26.99	300	3.83	33.94	2.20	26.99	108	0.53
534	3.60	34.147	0.97				27.17	400	3.72	34.04	1.59	27.08	99	0.64
784	3.29	34.346	0.63				27.36	500	3.63	34.12	1.12	27.15	92	0.74
1010	2.83	34.372	0.60				27.42	600	3.51	34.21	0.87	27.23	85	0.83
1284	2.58	34.437	0.62				27.50	700	3.38	34.29	0.73	27.30	78	0.92
								800	3.25	34.35	0.63	27.36	73	1.00
								1000	2.85	34.37	0.60	27.42	67	1.15
								1200	2.65	34.42	0.62	27.47	62	1.30

a) Value interpolated by two-point logarithmic method.

	OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
311	CGS ST. CATHARINES; August 14, 1959; 1855 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 210°, 19 kt; weather, overcast; sea, rough.														
	0	12.10	32.841					24.92	0	12.10	32.84		24.92	304	0.00
	9	12.04	32.697					24.82	10	12.04	32.70		24.82	314	0.03
	19	12.06	32.700					24.81	20	12.06	32.70		24.82	314	0.06
	28	12.05	32.703					24.82	30	11.81	32.71		24.87	309	0.09
	46	10.26	32.784					25.20	50	9.29	32.82		25.39	260	0.15
	69	5.44	32.952					26.03	75	5.27	32.97		26.06	196	0.21
	93	4.83	33.010					26.14	100	4.74	33.00		26.15	187	0.26
	116	4.55	32.992					26.16	125	4.94	33.19		26.27	176	0.30
	139	5.49	33.473					26.43	150	5.25	33.65		26.60	145	0.34
	162	5.01	33.826					26.77	175	4.76	33.83		26.79	127	0.38
	185	4.58	33.826					26.81	200	4.43	33.82		26.83	123	0.41
	232	4.15	33.824					26.86	250	4.04	33.86		26.90	116	0.47
	268	3.93	33.899					26.94							
312	CGS ST. CATHARINES; August 18, 1959; 1854 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 290°, 9 kt; weather, fog; sea, moderate.														
	0	12.20	32.803	6.50				24.87	0	12.20	32.80	6.50	24.87	309	0.00
	10	11.76	32.696	6.37				24.87	10	11.76	32.70	6.37	24.87	309	0.03
	19	11.74	32.697	6.37				24.87	20	11.74	32.70	6.37	24.87	309	0.06
	29	11.74	32.694	6.14				24.87	30	11.51	32.70	6.40	24.92	304	0.09
	48	8.14	32.845	6.93				25.58	50	7.89	32.86	6.94	25.63	237	0.15
	73	5.50	32.980	7.04				26.04	75	5.46	32.98	7.04	26.05	197	0.20
	97	5.09	32.999	7.06				26.10	100	5.04	33.00	7.04	26.11	191	0.25
	121	4.69	33.012	6.98				26.16	125	4.80	33.13	6.61	26.24	179	0.30
	145	5.32	33.694	4.88				26.63	150	5.25	33.72	4.75	26.66	139	0.34
	169	5.00	33.826	4.26				26.77	175	4.90	33.83	4.17	26.78	128	0.37
	193	4.62	33.826	3.90				26.81	200	4.54	33.83	3.77	26.82	124	0.40
	242	4.13	33.859	3.14				26.89	250	4.09	33.87	2.99	26.90	116	0.47
	290	3.92	33.919	2.35				26.96	300	3.91	33.93	2.27	26.97	110	0.52
	502	3.74	34.136	1.03				27.15	400	3.81	34.05	1.58	27.07	100	0.63
	753	3.31	34.308	0.66				27.33	500	3.74	34.13	1.04	27.15	92	0.74
	996	2.87	34.405	0.63				27.44	600	3.55	34.21	0.87	27.23	85	0.83
	1250	2.59	34.479	0.35				27.53	700	3.39	34.28	0.73	27.29	79	0.92
									800	3.21	34.33	0.65	27.35	74	1.00
									1000	2.87	34.41	0.63	27.45	64	1.15
									1200	2.64	34.47	0.39	27.51	58	1.29
313	CGS ST. CATHARINES; August 20, 1959; 1859 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 260°, 8 kt; weather, patches of shallow fog; sea, rough.														
	0	12.20	32.792					24.86	0	12.20	32.79		24.86	310	0.00
	10	12.00	32.745					24.86	10	12.00	32.74		24.86	310	0.03
	20	11.99	32.752					24.87	20	11.99	32.75		24.87	309	0.06
	30	11.74	32.744					24.91	30	11.74	32.74		24.91	305	0.09
	50	5.98	32.971					25.98	50	5.98	32.97		25.98	204	0.14
	75	5.33	32.989					26.07	75	5.33	32.99		26.07	195	0.20
	100	4.86	33.007					26.13	100	4.86	33.01		26.13	189	0.24
	124	5.47	33.620					26.55	125	5.46	33.63		26.56	148	0.29
	149	5.20	33.800					26.72	150	5.18	33.80		26.73	132	0.32
	175	4.76	33.814					26.78	175	4.76	33.81		26.78	128	0.36
	200	4.45	33.823					26.83	200	4.45	33.82		26.83	123	0.39
	250	4.06	33.850					26.89	250	4.06	33.85		26.89	117	0.45
	303	3.89	33.919					26.96	300	3.90	33.92		26.96	110	0.51
	500	3.74	34.140					27.15	400	3.81	34.04		27.07	100	0.62
	850	3.08	34.342					27.37	500	3.74	34.14		27.15	92	0.72
	1056	2.77	34.418					27.46	600	3.51	34.21		27.23	85	0.81
	1306	2.49	34.480					27.54	700	3.32	34.27		27.29	79	0.90
									800	3.16	34.32		27.35	74	0.98
									1000	2.85	34.40		27.44	65	1.14
									1200	2.60	34.46		27.51	58	1.27

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; August 21, 1959; 1707 GCT; 49°50'N, 142°08'W; sounding, 2200 fm; wind, 310°, 8 kt; weather, cloudy; sea, moderate.														6
0	12.30	32.754					24.81	0	12.30	32.75		24.81	315	0.00
10	12.24	32.828					24.88	10	12.24	32.83		24.88	308	0.03
19	12.23	32.729					24.81	20	12.23	32.73		24.81	315	0.06
29	12.25	32.750					24.82	30	12.07	32.76		24.86	310	0.09
48	9.49	32.873					25.40	50	9.14	32.89		25.46	253	0.15
72	5.92	33.006					26.01	75	5.81	33.01		26.03	199	0.21
97	5.11	33.022					26.12	100	5.13	33.07		26.16	186	0.26
121	5.28	33.389					26.39	125	5.32	33.45		26.43	161	0.30
145	5.53	33.726					26.63	150	5.45	33.75		26.66	139	0.34
169	5.18	33.840					26.76	175	5.11	33.84		26.77	128	0.37
193	4.93	33.856					26.80	200	4.85	33.86		26.81	125	0.41
241	4.45	33.877					26.87	250	4.37	33.88		26.88	118	0.47
289	4.05	33.907					26.93	300	4.04	33.92		26.95	111	0.53
486	3.87	34.125a)					(27.13)	400	3.94	34.04		27.05	102	0.64
732	3.43	34.299					27.31	500	3.84	34.14		27.14	93	0.74
982	2.97	34.400					27.43	600	3.64	34.22		27.22	86	0.84
1232	2.64	34.481					27.52	700	3.48	34.28		27.29	79	0.92
								800	3.29	34.33		27.35	74	1.01
								1000	2.94	34.41		27.44	65	1.16
								1200	2.68	34.47		27.51	58	1.30
CGS ST. CATHARINES; August 22, 1959; 0227 GCT; 49°37'N, 139°30'W; sounding, 2200 fm; wind, 280°, 5 kt; weather, cloudy; sea, moderate.														5
0	12.90	32.748					24.69	0	12.90	32.75		24.69	326	0.00
10	12.86	32.682					24.65	10	12.86	32.68		24.65	330	0.03
20	12.64	32.690					24.70	20	12.64	32.69		24.70	325	0.07
29	12.64	32.833					24.81	30	12.43	32.85		24.86	310	0.10
49	9.27	33.140					25.64	50	9.12	33.14		25.66	234	0.15
73	6.27	33.072					26.02	75	6.22	33.07		26.03	199	0.21
98	5.69	33.084					26.10	100	5.73	33.12		26.12	190	0.26
122	6.13	33.478					26.36	125	6.08	33.51		26.39	164	0.30
147	5.74	33.720b)					(26.60)	150	5.69	33.73		26.61	144	0.34
171	5.34	33.782b)					(26.69)	175	5.30	33.79		26.71	134	0.38
195	5.09	33.841					26.77	200	5.05	33.85		26.78	128	0.41
244	4.75	33.941					26.89	250	4.71	33.94		26.89	117	0.47
293	4.43	33.960					26.94	300	4.42	33.97		26.94	112	0.53
483	4.26	34.159					27.11	400	4.32	34.08		27.05	102	0.64
725	3.53	34.289					27.29	500	4.20	34.17		27.13	94	0.75
981	2.95	34.408					27.44	600	3.87	34.23		27.21	87	0.84
1210	2.63	34.488					27.53	700	3.59	34.28		27.27	81	0.93
								800	3.34	34.33		27.34	74	1.02
								1000	2.92	34.42		27.45	64	1.17
								1200	2.64	34.48		27.53	56	1.31

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
4	CGS ST. CATHARINES; August 22, 1959; 1215 GCT; 49°27'N, 136°40'W; sounding, 2000 fm; wind, 300°, 5 kt; weather, cloudy; sea, slight.													
0	12.20	32.836					24.89	0	12.20	32.84		24.89	307	0.00
10	13.20	32.670					24.57	10	13.20	32.67		24.57	338	0.03
20	13.23	32.682					24.57	20	13.23	32.68		24.57	338	0.07
29	13.13	32.669					24.58	30	12.90	32.68		24.64	331	0.10
49	9.39	32.860					25.40	50	9.29	32.86		25.42	257	0.16
74	7.32	32.911					25.75	75	7.29	32.92		25.76	224	0.22
98	6.75	33.041					25.93	100	6.75	33.07		25.95	206	0.28
123	6.71	33.344					26.18	125	6.68	33.37		26.20	183	0.32
147	6.37	33.650					26.46	150	6.33	33.67		26.48	156	0.37
172	6.09	33.793					26.61	175	6.05	33.80		26.62	143	0.40
197	5.77	33.841					26.69	200	5.73	33.84		26.69	136	0.44
246	5.20	33.855					26.77	250	5.15	33.86		26.78	128	0.51
295	4.67	33.914					26.87	300	4.65	33.92		26.88	118	0.57
493	4.12	34.094					27.08	400	4.34	34.02		26.99	108	0.69
740	3.64	34.278					27.27	500	4.10	34.10		27.08	99	0.80
989	3.13	34.392					27.41	600	3.89	34.18		27.17	90	0.90
1238	2.69	34.464					27.51	700	3.71	34.25		27.24	84	0.99
								800	3.50	34.31		27.31	77	1.08
								1000	3.11	34.40		27.41	68	1.24
								1200	2.75	34.45		27.49	60	1.38
3	CGS ST. CATHARINES; August 22, 1959; 2129 GCT; 49°16'N, 134°00'W; sounding, 2000 fm; wind, 280°, 5 kt; weather, cloudy; sea, slight.													
0	14.00	32.592					24.35	0	14.00	32.59		24.35	359	0.00
10	13.90	32.512					24.31	10	13.90	32.51		24.31	362	0.04
20	13.87	32.533					24.33	20	13.87	32.53		24.33	360	0.07
30	12.16	32.578					24.70	30	12.16	32.58		24.70	325	0.11
50	7.88	32.737					25.54	50	7.88	32.74		25.54	245	0.16
75	6.65	32.847					25.79	75	6.65	32.85		25.79	222	0.22
100	6.14	32.895					25.90	100	6.14	32.90		25.90	211	0.28
125	5.82	32.936					25.97	125	5.82	32.94		25.97	204	0.33
150	6.18	33.133					26.08	150	6.18	33.13		26.08	194	0.38
175	6.33	33.529					26.37	175	6.33	33.53		26.37	166	0.43
200	6.20	33.684					26.51	200	6.20	33.68		26.51	153	0.47
250	5.66	33.829					26.69	250	5.66	33.83		26.69	136	0.54
265	5.28	33.906					26.80	300	5.09	33.95		26.85	121	0.61
486	4.33	34.104					27.06	400	4.64	34.04		26.98	109	0.73
729	3.77	34.244					27.23	500	4.29	34.11		27.07	100	0.84
972	3.13	34.371					27.39	600	4.04	34.18		27.15	92	0.94
1215	2.67	34.463					27.51	700	3.83	34.23		27.21	86	1.04
								800	3.56	34.28		27.28	80	1.13
								1000	3.07	34.38		27.41	68	1.29
								1200	2.70	34.46		27.50	59	1.43

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; August 23, 1959; 0806 GCT; 49°03'N, 131°00'W; sounding, 1700 fm; wind, 270°, 5 kt; weather, overcast; sea, moderate.														2
0	14.40	32.608					24.28	0	14.40	32.61		24.28	365	0.00
9	14.77	32.492					24.11	10	14.77	32.49		24.11	382	0.04
19	14.76	32.491					24.11	20	14.73	32.49		24.12	380	0.08
28	14.53	32.497					24.17	30	13.98	32.51		24.29	364	0.11
46	10.37	32.621					25.06	50	9.89	32.64		25.15	282	0.18
69	7.97	32.713					25.51	75	7.82	32.74		25.55	244	0.24
93	7.41	32.805					25.66	100	7.15	32.84		25.72	228	0.30
116	6.62	32.927					25.86	125	6.54	33.14		26.03	199	0.36
139	6.43	33.434					26.28	150	6.42	33.58		26.40	164	0.40
162	6.40	33.737					26.53	175	6.31	33.78		26.57	148	0.44
186	6.24	33.807					26.60	200	6.05	33.84		26.65	140	0.48
232	5.67	33.907					26.75	250	5.45	33.91		26.78	128	0.55
275	5.17	33.924					26.83	300	5.03	33.95		26.86	120	0.61
491	4.24	34.118					27.08	400	4.57	34.05		26.99	108	0.73
789	3.60	34.329					27.31	500	4.22	34.13		27.09	98	0.84
1036	2.97	34.437					27.46	600	3.97	34.21		27.18	90	0.94
1281	2.48a)	34.493					(27.55)	700	3.76	34.28		27.26	82	1.03
								800	3.57	34.33		27.32	76	1.12
								1000	3.05	34.42		27.44	65	1.28
								1200	2.63	34.48		27.52	57	1.41
CGS ST. CATHARINES; August 23, 1959; 1859 GCT; 48°48'N, 128°00'W; sounding, 1200 fm; wind, 320°, 13 kt; weather, partly cloudy; sea, moderate.														1
0	15.10	32.007					23.67	0	15.10	32.01		23.67	423	0.00
9	14.97	31.946					23.65	10	14.97	31.95		23.65	425	0.04
19	14.95	31.948					23.66	20	14.93	32.01		23.71	420	0.08
29	14.76	32.517					24.13	30	14.54	32.52		24.18	375	0.12
48	11.30	32.618					24.89	50	11.07	32.62		24.93	303	0.19
72	9.00	32.659					25.31	75	8.83	32.67		25.34	264	0.27
96	7.77	32.708					25.53	100	7.65	32.77		25.59	240	0.33
120	7.13	33.037					25.88	125	7.15	33.11		25.93	208	0.39
144	7.23	33.367					26.12	150	7.12	33.42		26.18	184	0.44
168	6.81	33.557					26.33	175	6.83	33.62		26.38	166	0.48
192	6.87	33.773					26.49	200	6.87	33.81		26.52	152	0.52
240	6.88	33.973					26.65	250	6.75	33.98		26.67	138	0.60
288	6.32	34.021					26.76	300	6.18	34.03		26.79	127	0.66
490	4.54	34.163					27.09	400	5.22	34.11		26.97	110	0.79
735	3.95	34.303					27.26	500	4.51	34.17		27.09	98	0.90
982	3.39	34.415					27.40	600	4.25	34.23		27.17	91	1.00
1232	2.89	34.490					27.51	700	4.02	34.29		27.24	84	1.09
								800	3.79	34.34		27.30	78	1.18
								1000	3.35	34.42		27.41	68	1.34
								1200	2.95	34.48		27.50	59	1.49

a) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
1	CGS ST. CATHARINES; September 23, 1959; 0852 GCT; 48°48'N, 128°00'W; sounding, missing; wind, 100°, 5 kt; weather, cloudy; sea, missing.													
0	14.50	32.340					24.05	0	14.50	32.34		24.05	387	0.00
10	14.27	32.290					24.06	10	14.27	32.29		24.06	386	0.04
20	14.20	32.330					24.11	20	14.20	32.33		24.11	382	0.08
29	13.52	32.555					24.42	30	13.23	32.56		24.48	346	0.11
49	8.72	32.618					25.32	50	8.67	32.62		25.33	265	0.18
73	7.74	32.699					25.53	75	7.71	32.73		25.55	244	0.24
98	7.44	33.018					25.82	100	7.42	33.05		25.85	216	0.30
122	7.24	33.394					26.14	125	7.23	33.43		26.17	185	0.35
147	7.18	33.680					26.38	150	7.16	33.69		26.39	164	0.39
171	7.02	33.781					26.48	175	6.98	33.79		26.49	155	0.44
196	6.80	33.855					26.57	200	6.76	33.86		26.57	148	0.47
246	6.40	33.910					26.66	250	6.35	33.91		26.67	138	0.55
296	5.84	33.951					26.77	300	5.80	33.95		26.77	128	0.62
380	5.12	34.002					26.89	400	5.03	34.02		26.92	114	0.74
478	4.70	34.083					27.00	500	4.62	34.10		27.03	104	0.86
725	3.95	34.253					27.22	600	4.29	34.18		27.12	95	0.96
978	3.43	34.374					27.37	700	4.01	34.24		27.20	88	1.06
1228	2.92	34.466a)					(27.49)	800	3.78	34.29		27.27	81	1.15
								1000	3.38	34.38		27.38	71	1.32
								1200	2.97	34.46		27.48	61	1.47
2	CGS ST. CATHARINES; September 23, 1959; 2019 GCT; 49°03'N, 131°00'W; sounding, missing; wind, 250°, 8 kt; weather, fog in patches; sea, moderate.													
0	13.90	32.488					24.29	0	13.90	32.49		24.29	364	0.00
10	13.50	32.504					24.38	10	13.50	32.50		24.38	356	0.04
20	13.44	32.504					24.40	20	13.44	32.50		24.40	354	0.07
30	13.32	32.520					24.43	30	13.32	32.52		24.43	351	0.11
49	8.49	32.742					25.45	50	8.43	32.75		25.46	348	0.17
74	7.19	32.826					25.70	75	7.16	32.83		25.71	229	0.23
98	6.56	32.924					25.87	100	6.56	32.97		25.90	211	0.28
123	6.56	33.412					26.25	125	6.55	33.44		26.27	176	0.33
148	6.47	33.690					26.48	150	6.45	33.70		26.49	155	0.38
172	6.20	33.805					26.61	175	6.17	33.81		26.61	144	0.42
197	5.93	33.843					26.67	200	5.90	33.85		26.68	137	0.45
246	5.55	33.894					26.76	250	5.50	33.90		26.76	129	0.52
295	5.02	33.930					26.85	300	4.99	33.93		26.85	121	0.58
382	4.63	33.992					26.94	400	4.56	34.01		26.96	110	0.70
476	4.29	34.070					27.04	500	4.22	34.09		27.06	101	0.82
732	3.66	34.242					27.24	600	3.95	34.16		27.15	92	0.92
960	3.15	34.369					27.39	700	3.73	34.22		27.22	86	1.01
								800	3.49	34.28		27.29	79	1.10

a) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; September 24, 1959; 0802 GCT; 49°16'N, 134°00'W; sounding, missing; wind, 180°, 20 kt; weather, moderate rain; sea, missing. 3

0	13.20	32.494					24.44	0	13.20	32.49		24.44	350	0.00
9	12.99	32.536					24.51	10	12.99	32.54		24.51	343	0.04
20	12.95	32.540					24.52	20	12.95	32.54		24.52	342	0.07
29	12.89	32.558					24.55	30	12.69	32.57		24.59	336	0.10
36	11.58	32.630					24.85	50	8.57	32.76		25.45	254	0.16
45	8.99	32.739					25.37	75	7.09	32.88		25.76	224	0.22
68	7.29	32.820					25.69	100	6.58	33.15		26.04	198	0.28
90	6.72	32.986					25.89	125	6.48	33.59		26.40	164	0.32
113	6.42	33.345					26.21	150	6.41	33.84		26.60	145	0.36
135	6.52	33.776					26.54	175	6.23	33.90		26.68	137	0.40
160	6.35	33.875					26.64	200	6.10	33.92		26.71	134	0.43
185	6.15	33.912					26.70	250	5.93	33.95		26.75	130	0.50
235	6.00	33.940					26.74	300	5.70	33.97		26.80	126	0.57
278	5.80	33.958					26.78	400	5.26	34.02		26.89	117	0.69
308	5.66	33.974					26.81	500	4.79	34.11		27.01	106	0.81
395	5.29	34.014					26.88	600	4.40	34.18		27.11	96	0.92
638	4.27	34.203a)					(27.15)	700	4.00	34.24		27.20	88	1.02
841	3.45	34.313					27.32	800	3.60	34.29		27.29	79	1.11

CGS ST. CATHARINES; September 24, 1959; 1753 GCT; 49°26'N, 136°40'W; sounding, missing; wind, 290°, 21 kt; weather, overcast; sea, missing. 4

0	13.10	32.635					24.56	0	13.10	32.64		24.56	339	0.00
10	13.18	32.636					24.55	10	13.18	32.64		24.55	340	0.03
19	13.17	32.626					24.54	20	13.17	32.63		24.54	340	0.07
29	13.17	32.628					24.55	30	13.16	32.63		24.55	340	0.10
48	13.06	32.634					24.57	50	12.47	32.65		24.70	325	0.17
71	7.29	32.783					25.66	75	7.08	32.80		25.70	230	0.24
95	6.16	32.869					25.87	100	6.09	32.89		25.90	211	0.30
119	5.83	32.947					25.98	125	6.04	33.08		26.06	196	0.35
143	6.60	33.448					26.27	150	6.44	33.55		26.37	166	0.39
161	6.19	33.696					26.52	175	6.05	33.74		26.57	148	0.43
190	5.92	33.778					26.62	200	5.76	33.79		26.65	140	0.47
238	5.20	33.824					26.74	250	5.08	33.83		26.76	129	0.54
285	4.77	33.858					26.82	300	4.69	33.88		26.84	122	0.60
382	4.34	33.971					26.95	400	4.29	33.99		26.97	110	0.72
480	4.07	34.058					27.05	500	4.02	34.08		27.07	100	0.83
725	3.55	34.230a)					(27.24)	600	3.79	34.15		27.15	92	0.94
974	3.11	34.354					27.38	700	3.59	34.22		27.23	85	1.03
1000	3.07b)	34.365b)					(27.39)	800	3.40	34.27		27.29	79	1.12
								1000	3.07	34.36		27.39	70	1.28

a) Value questionable; interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.

5 CGS ST. CATHARINES; September 25, 1959; 0455 GCT; 49°38'N, 139°30'W; sounding, missing; wind, 200°, 1 kt; weather, missing; sea, calm.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	12.90	32.794					24.73	0	12.90	32.79		24.73	322	0.00
10	12.99	32.680					24.62	10	12.99	32.68		24.62	333	0.03
20	12.98a)	32.660a)					(24.61)	20	12.98	32.66		24.61	334	0.07
29	12.96	32.660					24.61	30	12.96	32.66		24.61	334	0.10
48	12.90	32.678					24.64	50	12.27	32.70		24.77	319	0.17
72	6.45	32.880					25.84	75	6.40	32.90		25.86	310	0.23
97	6.05	32.996					25.99	100	6.08	33.03		26.01	201	0.29
121	6.24a)	33.240					(26.16)	125	6.25	33.35		26.24	179	0.33
145	6.28	33.860a)					(26.64)	150	6.21	33.86		26.65	140	0.38
169	5.98	33.850					26.67	175	5.86	33.85		26.68	137	0.41
193	5.54	33.843					26.72	200	5.49	33.84		26.72	133	0.44
241	5.25a)	33.838					(26.75)	250	5.20	33.84		26.75	130	0.51
290	5.01	33.842					26.78	300	4.86	33.86		26.81	125	0.58
372	3.92	33.976					27.00	400	3.93	34.01		27.03	104	0.70
473	3.95	34.086					27.09	500	3.88	34.11		27.11	96	0.80
717	3.44	34.256					27.27	600	3.66	34.18		27.19	89	0.90
968	3.00	34.371					27.41	700	3.47	34.25		27.26	82	0.99
1217	2.63	34.446					27.50	800	3.28	34.30		27.32	76	1.08
								1000	2.95	34.38		27.42	67	1.23
								1200	2.65	34.44		27.49	60	1.38

6 CGS ST. CATHARINES; September 25, 1959; 1707 GCT; 49°49'N, 142°10'W; sounding, missing; wind, 280°, 20 kt; weather, intermittent slight rain; sea, moderate.

0	12.80	32.700					24.67	0	12.80	32.70		24.67	328	0.00
9	12.63	32.690					24.70	10	12.63	32.69		24.70	325	0.03
20	12.62a)	32.690a)					(24.70)	20	12.62	32.69		24.70	325	0.07
27	12.62	32.686					24.70	30	12.61	32.69		24.70	325	0.10
45	12.55	32.691					24.71	50	11.01	32.76		25.05	292	0.16
68	6.36	32.971					25.93	75	6.05	32.98		25.98	204	0.22
91	5.43	33.006					26.07	100	5.31	33.02		26.09	193	0.27
113	5.16	33.028					26.12	125	5.34	33.22		26.25	178	0.32
136	5.49	33.378					26.36	150	5.52	33.61		26.54	150	0.36
159	5.53	33.755					26.65	175	5.20	33.78		26.71	134	0.40
181	5.09	33.792					26.73	200	4.80	33.81		26.78	128	0.43
227	4.42	33.827					26.83	250	4.23	33.84		26.86	120	0.50
272	4.06	33.856					26.89	300	4.02	33.89		26.93	113	0.56
352	3.96	33.952					26.98	400	3.91	34.01		27.03	104	0.67
530	3.80	34.139					27.14	500	3.82	34.11		27.12	95	0.77
670	3.49	34.230					27.25	600	3.64	34.19		27.20	88	0.87
853	3.04	34.347					27.38	700	3.41	34.25		27.27	81	0.96
1082	2.72	34.414					27.46	800	3.16	34.32		27.35	74	1.04
								1000	2.83	34.39		27.44	65	1.20

a) Value interpolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; September 26, 1959; 1831 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 300°, 3 kt; weather, overcast; sea, slight. 401

0	12.20	32.740	6.27	19.3		24.82	0	12.20	32.74	6.27	24.82	314	0.00
9	12.24	32.658	6.14	17.2		24.75	10	12.24	32.66	6.14	24.75	320	0.03
20	12.23a)	32.660a)	6.16a)	-		(24.75)	20	12.23	32.66	6.16	24.75	320	0.06
28	12.22	32.656	6.18	17.4		24.75	30	11.82	32.68	6.25	24.84	312	0.10
47	9.08	32.820	6.70	22.9		25.42	50	8.50	32.84	6.72	25.53	246	0.15
70	5.24	32.952	6.84	32.3		26.05	75	5.12	32.96	6.85	26.07	195	0.21
94	4.73	32.974	6.90	33.2		26.12	100	4.74	32.99	6.84	26.13	189	0.26
117	4.77	33.016	6.71	34.4		26.15	125	4.98	33.25	6.01	26.31	172	0.30
141	5.37	33.677	4.73	47.8		26.61	150	5.31	33.73	4.51	26.65	140	0.34
164	5.23	33.796	4.20	53.7		26.72	175	5.04	33.80	4.07	26.74	131	0.38
188	4.84	33.803	3.91	59.6		26.77	200	4.66	33.81	3.70	26.79	127	0.41
236	4.19	33.822	3.14	71.5		26.85	250	4.10	33.84	2.96	26.88	118	0.47
284	3.90	33.877	2.55	80.9		26.93	300	3.88	33.90	2.32	26.95	111	0.53
335	3.84	33.948	1.85	92.9		26.99	400	3.78	34.02	1.41	27.05	102	0.64
420	3.76	34.043	1.29	105		27.07	500	3.66	34.12	1.05	27.15	92	0.74
640	3.51	34.240	0.73	122		27.25	600	3.55	34.21	0.82	27.23	85	0.84
873	3.07	34.327	0.59	138		27.36	700	3.38	34.26	0.69	27.29	79	0.93
1200	2.60	34.446	0.56	156		27.50	800	3.19	34.30	0.63	27.33	75	1.01
							1000	2.87	34.38	0.58	27.42	67	1.17
							1200	2.60	34.45	0.56	27.50	59	1.31

CGS ST. CATHARINES; September 29, 1959; 1859 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 190°, 20 kt; weather, overcast; sea, rough. 402

0	12.70	32.694	6.18	18.4	0.17	24.69	0	12.70	32.69	6.18	24.69	326	0.00
9	12.40	32.656	6.19	17.1	0.17	24.72	10	12.40	32.66	6.19	24.72	323	0.03
20	12.40a)	32.660a)	6.20a)	-	-	(24.72)	20	12.40	32.66	6.20	24.72	323	0.06
28	12.36	32.658	6.20	16.9	0.18	24.73	30	12.36	32.66	6.20	24.73	322	0.10
38	12.36	32.657	6.18	16.9	0.19	24.72	50	10.94	32.72	6.34	25.03	294	0.16
47	11.83	32.680	6.24	17.3	0.16	24.84	75	5.63	32.95	6.92	26.00	202	0.22
71	5.73	32.948	6.96	26.6	0.60	25.99	100	5.14	32.97	6.79	26.08	194	0.27
94	5.23	32.972	6.76	28.7	0.40	26.07	125	5.02	33.02	6.68	26.13	189	0.32
118	4.91	32.975	6.84	30.9	0.07	26.10	150	5.26	33.29	5.82	26.31	172	0.37
141	5.24	33.110	6.33	35.5	0.07	26.17	175	5.20	33.65	4.75	26.61	144	0.41
165	5.30	33.570	5.04	44.4	0.07	26.53	200	4.92	33.77	4.20	26.73	132	0.44
188	5.07	33.753	4.39	48.5	0.10	26.70	250	4.43	33.81	3.57	26.82	124	0.51
235	4.53	33.806	3.70	60.2	-	26.80	300	4.13	33.82	3.21	26.86	120	0.57
282	4.23	33.819	3.34	66.9	0.13	26.85							
300	4.13b)	33.823b)	3.21b)	-	-	(26.86)							

CGS ST. CATHARINES; October 2, 1959; 1907 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 020°, 16 kt; weather, overcast; sea, rough. 403

0	12.20	32.660	6.25	24.76	0	12.20	32.66	6.25	24.76	320	0.00
9	12.49	32.658	6.20	24.70	10	12.49	32.66	6.20	24.70	325	0.03
20	12.50a)	32.660a)	6.23a)	(24.70)	20	12.50	32.66	6.23	24.70	325	0.06
28	12.49	32.660	6.25	24.70	30	12.28	32.67	6.28	24.75	320	0.10
47	10.83	32.749	6.47	25.08	50	10.00	32.78	6.54	25.24	274	0.16
70	5.37	32.950	6.92	26.03	75	5.29	32.96	6.90	26.05	197	0.22
94	5.04	32.995	6.82	26.11	100	5.11	33.06	6.63	26.15	187	0.27
117	5.28	33.229	6.14	26.26	125	5.34	33.40	5.69	26.39	164	0.31
141	5.44	33.714	4.88	26.63	150	5.33	33.74	4.63	26.66	139	0.35
164	5.18	33.788	4.26	26.72	175	5.00	33.79	4.11	26.74	131	0.38
188	4.81	33.800	3.94	26.77	200	4.67	33.81	3.76	26.79	127	0.42
235	4.30	33.825	3.29	26.84	250	4.18	33.84	3.05	26.87	119	0.48
283	3.95	33.876	2.54	26.92	300	3.92	33.90	2.36	26.94	113	0.54
388	3.80	33.994	1.59	27.03	400	3.79	34.01	1.51	27.04	103	0.65
475	3.76	34.105	1.08	27.12	500	3.71	34.12	1.02	27.14	93	0.75
714	3.36	34.266	0.67	27.29	600	3.53	34.20	0.84	27.22	86	0.85
971	2.91	34.370	0.58	27.41	700	3.38	34.26	0.69	27.28	80	0.94
1224	2.59	34.443	0.64	27.50	800	3.19	34.30	0.64	27.33	75	1.02
					1000	2.87	34.38	0.59	27.42	67	1.18
					1200	2.62	34.44	0.64	27.49	60	1.32

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

	OBSERVED						COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
404	CGS ST. CATHARINES; October 6, 1959; 1914 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 090°, 20 kt; weather, overcast; sea, rough.														
	0	12.30	32.692	6.31	19.2	-	24.76	0	12.30	32.69	6.31	24.76	320	0.00
	9	12.32	32.679	6.22	18.1	0.10	24.75	10	12.32	32.68	6.22	24.75	320	0.03
	20	12.31a)	32.680a)	6.23a)	-	-	(24.75)	20	12.31	32.68	6.23	24.75	320	0.06
	28	12.31	32.677	6.31	22.3	0.14	24.75	30	12.30	32.68	6.31	24.75	320	0.10
	38	12.26	32.680	6.28	19.6	0.08	24.76	50	7.11	32.92	6.89	25.79	317	0.15
	47	7.66	32.898	6.87	24.6	0.28	25.70	75	5.14	32.98	6.97	26.08	194	0.20
	56	6.10	32.961	6.92	30.7	0.67	25.95	100	4.87	33.05	6.66	26.17	184	0.25
	70	5.25	32.981	6.98	30.8	0.76	26.07	125	5.12	33.41	5.45	26.43	161	0.30
	94	4.79	32.984	6.91	32.4	0.00	26.12	150	5.02	33.76	4.27	26.71	134	0.33
	117	5.09	33.230	6.04	39.9	0.00	26.29	175	4.66	33.82	3.84	26.80	126	0.37
	141	5.17	33.741	4.40	50.0	0.00	26.68	200	4.42	33.85	3.47	26.85	121	0.40
	164	4.81	33.784	4.07	53.6	-	26.76	250	4.08	33.85	2.90	26.89	117	0.46
	185	4.54	33.850	3.65	65.5	-	26.84	300	3.79	33.89	2.27	26.95	111	0.52
	235	4.18	33.841	3.11	69.6	-	26.87							
	280	3.90	33.876	2.51	77.7	-	26.93							
	300	3.79b)	33.890b)	2.27b)	-	-	(26.95)							
405	CGS ST. CATHARINES; October 10, 1959; 1907 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 230°, 1 kt; weather, fog; sea, calm.														
	0	12.10	32.669	6.33	15.7		24.78	0	12.10	32.67	6.33	24.78	318	0.00
	10	11.88	32.692	6.33	15.0		24.84	10	11.88	32.69	6.33	24.84	312	0.03
	20	11.88a)	32.670a)	6.33a)	-		(24.82)	20	11.88	32.67	6.33	24.82	314	0.06
	30	11.84	32.668	6.24	15.0		24.83	30	11.84	32.67	6.24	24.83	313	0.10
	50	7.46	32.922	6.83	23.0		25.74	50	7.46	32.92	6.83	25.74	226	0.15
	75	5.20	33.008	6.85	27.6		26.10	75	5.20	33.01	6.85	26.10	192	0.20
	100	4.98	33.042	6.74	29.2		26.15	100	4.98	33.04	6.74	26.15	187	0.25
	124	5.33	33.503	5.33	39.2		26.47	125	5.33	33.52	5.29	26.48	156	0.29
	149	5.37	33.817	4.32	45.6		26.72	150	5.35	33.82	4.31	26.72	133	0.33
	174	4.96	33.817	4.04	52.8		26.76	175	4.94	33.82	4.03	26.77	128	0.36
	199	4.57	33.827	3.67	57.2		26.82	200	4.56	33.83	3.66	26.82	124	0.40
	249	4.15	33.859	2.98	66.6		26.89	250	4.14	33.86	2.96	26.89	117	0.46
	293	3.92	33.908	2.24	75.7		26.95	300	3.92	33.92	2.15	26.96	110	0.52
	372	3.92	34.057	1.32	90.2		27.07	400	3.88	34.08	1.20	27.09	98	0.62
	468	3.80	34.146	0.92	98.3		27.15	500	3.73	34.17	0.87	27.17	91	0.72
	738	3.29	34.281	0.62	116		27.31	600	3.52	34.22	0.75	27.24	84	0.82
	986	2.88	34.384	0.52	129		27.43	700	3.35	34.26	0.65	27.29	79	0.90
	1000	2.86b)	34.389b)	0.52b)	-		(27.43)	800	3.18	34.31	0.58	27.34	74	0.99
								1000	2.86	34.39	0.52	27.43	66	1.14
406	CGS ST. CATHARINES; October 14, 1959; 1916 GCT; 49°50'N, 145°16'W; sounding, 2200 fm; wind, 290°, 10 kt; weather, cloudy; sea, moderate.														
	0	11.70	32.678	6.41	19.7	0.12	24.86	0	11.70	32.68	6.41	24.86	310	0.00
	10	11.76	32.648	6.33	17.9	0.12	24.83	10	11.76	32.65	6.33	24.83	313	0.03
	20	11.75a)	32.650a)	6.33a)	-	-	(24.83)	20	11.75	32.65	6.33	24.83	313	0.06
	30	11.75	32.659	6.26	16.9	0.09	24.84	30	11.75	32.66	6.26	24.84	312	0.09
	50	9.36	32.801	6.75	22.6	0.24	25.36	50	9.36	32.80	6.75	25.36	262	0.15
	65	5.56	32.983	6.96	30.8	0.43	26.04	75	5.22	33.01	6.92	26.09	193	0.21
	70	5.41	32.997	7.02	29.6	0.19	26.06	100	4.93	33.05	6.74	26.16	186	0.26
	75	5.22	33.006	6.92	35.1	0.03	26.09	125	5.36	33.45	5.47	26.43	161	0.30
	100	4.93	33.049	6.74	32.9	0.00	26.16	150	5.10	33.80	4.26	26.74	131	0.34
	125	5.36	33.446	5.47	39.8	0.00	26.43	175	4.82	33.79	4.09	26.76	129	0.37
	150	5.10	-	4.26	53.8	0.00		200	4.52	33.82	3.63	26.82	124	0.40
	175	4.82	-	4.09	55.5	-		250	4.06	33.85	2.90	26.89	117	0.47
	200	4.52	33.820	3.63	62.0	-	26.82	300	3.86	33.89	2.39	26.94	112	0.53
	250	4.06	33.851	2.90	73.8	-	26.89							
	300	3.86	33.891	2.39	79.4	-	26.94							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; October 16, 1959; 1922 GCT; 50°00'N, 144°44'W; sounding, 2200 fm; wind, 180°, 16 kt; weather, light fog; sea, rough. 407

0	12.10	32.645	6.41	16.0		24.76	0	12.10	32.64	6.41	24.76	320	0.00
9	11.96	32.643	6.38	16.5		24.79	10	11.96	32.64	6.38	24.79	317	0.03
20	11.96a)	32.640a)	6.38a)	-		(24.79)	20	11.96	32.64	6.38	24.79	317	0.06
27	11.93	32.644	6.37	16.5		24.80	30	11.94	32.64	6.36	24.79	317	0.10
45	11.97	32.649	6.29	16.6		24.79	50	11.84	32.67	6.36	24.84	312	0.16
68	11.45	32.751	6.55	18.6		24.97	75	9.82	32.81	6.70	25.29	269	0.23
91	6.54	32.922	7.00	23.2		25.87	100	6.18	32.95	6.85	25.94	207	0.29
113	5.70	32.988	6.66	27.8		26.02	125	5.58	33.06	6.56	26.10	192	0.34
136	5.47	33.127	6.47	-		26.16	150	5.60	33.41	5.61	26.37	166	0.39
159	5.67	33.580	5.10	40.9		26.49	175	5.37	33.74	4.13	26.65	140	0.43
181	5.27	33.791	3.80	50.1		26.71	200	5.01	33.80	3.62	26.75	130	0.46
227	4.67	33.819b)	3.38b)	-		(26.80)	250	4.37	33.83	3.20	26.84	122	0.53
269	4.15	33.841	3.07	69.4		26.87	300	4.04	33.89	2.60	26.92	114	0.59
356	3.86	33.963	1.87	82.4		27.00	400	3.86	34.01	1.59	27.03	104	0.70
466	3.87	34.070	1.23	93.6		27.08	500	3.79	34.10	1.12	27.12	95	0.81
689	3.42	34.252	0.64	113		27.27	600	3.58	34.19	0.85	27.20	88	0.90
940	2.99	34.342	0.48	125		27.38	700	3.40	34.26	0.63	27.28	80	0.99
1192	2.66	34.431	0.49	135		27.48	800	3.21	34.30	0.56	27.33	75	1.08
							1000	2.90	34.36	0.48	27.41	68	1.23

CGS ST. CATHARINES; October 23, 1959; 1904 GCT; 50°00'N, 145°00'W; sounding, 2200 fm; wind, 220°, 10 kt; weather, intermittent slight rain; sea, slight. 408

0	11.20	32.621	6.28	19.2	0.17	24.91	0	11.20	32.62	6.28	24.91	305	0.00
10	11.31	32.658	6.20	20.1	0.15	24.92	10	11.31	32.66	6.20	24.92	304	0.03
20	11.31a)	32.660a)	6.22a)	-	-	(24.92)	20	11.31	32.66	6.22	24.92	304	0.06
30	11.31	32.664	6.23	19.9	0.12	24.92	30	11.31	32.66	6.23	24.92	304	0.09
50	11.35	32.664	6.26	20.2	0.14	24.92	50	11.35	32.66	6.26	24.92	304	0.15
55	11.33	32.682	6.25	19.6	0.14	24.93	75	5.34	32.99	6.87	26.07	195	0.22
60	7.74	32.860	6.57	25.0	0.39	25.65	100	5.02	33.06	6.63	26.16	186	0.26
65	6.09	32.975	6.87	29.6	0.80	25.97	125	5.37	33.61	5.00	26.55	149	0.31
70	5.58	32.984	6.82	30.5	0.61	26.03	150	5.20	33.82	4.13	26.74	131	0.34
75	5.34	32.993	6.87	31.2	0.11	26.07	175	4.82	33.81	3.85	26.78	128	0.38
100	5.02	33.064	6.63	33.4	0.00	26.16	200	4.50	33.88	3.47	26.86	120	0.41
125	5.37	33.606	5.00	45.6	0.00	26.55	250	4.09	33.83	2.65	26.87	119	0.47
150	5.20	33.821	4.13	54.2	-	26.74	300	3.89	33.91	2.26	26.96	110	0.53
175	4.82	33.811	3.85	57.2	-	26.78							
200	4.50	33.876	3.47	62.5	-	26.86							
249	4.09	33.829	2.67	71.6	-	26.87							
298	3.90	33.911	2.27	80.7	-	26.95							
300	3.89c)	33.914c)	2.26c)	-	-	(26.96)							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

POG

P-59-4

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
409	CGS ST. CATHARINES; October 27, 1959; 1855 GCT; 50°00'N, 145°00'W; sounding, missing; wind, 260°, 25 kt; weather, partly cloudy; sea, rough.													
0	11.15	32.686	6.31		16.7		24.97	0	11.15	32.69	6.31	24.97	300	0.00
10	11.12	32.660a)	6.28		-		(24.96)	10	11.12	32.66	6.28	24.96	300	0.03
20	11.13a)	32.660a)	6.28a)		-		(24.95)	20	11.13	32.66	6.28	24.95	301	0.06
30	11.14	32.665	6.33		21.0		24.96	30	11.14	32.66	6.33	24.96	300	0.09
49	11.13	32.663	6.28		-		24.96	50	10.87	32.68	6.31	25.01	296	0.15
74	5.75	32.993	6.82		31.2		26.02	75	5.71	32.99	6.82	26.03	199	0.21
98	5.00	32.999	6.88		33.1		26.11	100	5.03	33.02	6.80	26.13	189	0.26
123	5.30	33.285	5.97		37.8		26.30	125	5.30	33.32	5.84	26.34	169	0.31
148	5.30	33.734	4.48		46.5		26.66	150	5.26	33.74	4.44	26.67	138	0.35
172	4.89	33.819	3.94		59.6		26.77	175	4.85	33.82	3.90	26.78	128	0.38
197	4.60	33.825	3.63		62.4		26.81	200	4.57	33.83	3.58	26.82	124	0.41
246	4.12	33.858	2.91		71.5		26.89	250	4.10	33.86	2.84	26.89	117	0.48
296	3.89	33.918	2.16		83.4		26.96	300	3.89	33.92	2.13	26.96	110	0.53
377	3.85	34.020	1.55		89.1		27.04	400	3.85	34.05	1.40	27.07	100	0.64
474	3.84	34.122	1.00		102		27.13	500	3.78	34.14	0.94	27.15	92	0.74
721	3.34	34.266	0.59		119		27.29	600	3.56	34.20	0.77	27.22	86	0.84
974	2.89	34.370	0.52		131		27.41	700	3.38	34.26	0.63	27.28	80	0.93
1224	2.58	34.438	0.57		139		27.50	800	3.18	34.30	0.57	27.33	75	1.01
								1000	2.85	34.38	0.53	27.42	67	1.17
								1200	2.61	34.43	0.57	27.49	60	1.31
4	CGS ST. CATHARINES; October 31, 1959; 1645 GCT; 49°27'N, 136°41'W; sounding, 1900 fm; wind, calm; weather, overcast; sea, missing.													
0	12.30	32.646					24.73	0	12.30	32.65		24.73	322	0.00
9	12.36	32.654					24.72	10	12.36	32.65		24.72	323	0.03
20	12.38a)	32.650a)					(24.72)	20	12.38	32.65		24.72	323	0.06
28	12.39	32.651					24.71	30	12.39	32.65		24.72	323	0.10
46	12.38	32.657					24.72	50	11.73	32.69		24.87	309	0.16
70	9.00	32.809					25.43	75	8.43	32.84		25.54	245	0.23
93	6.61	32.935					25.87	100	6.51	32.97		25.91	210	0.29
116	6.29	33.055					26.00	125	6.37	33.22		26.12	190	0.34
139	6.48	33.444					26.29	150	6.44	33.55		26.38	166	0.39
162	6.40	33.662					26.47	175	6.17	33.73		26.55	149	0.43
185	6.01	33.777					26.61	200	5.82	33.79		26.64	141	0.46
232	5.45	33.826					26.71	250	5.12	33.84		26.76	129	0.53
268	4.81	33.851					26.81	300	4.64	33.90		26.86	120	0.60
387	4.26	33.994					26.98	400	4.23	34.01		27.00	107	0.71
486	4.03	34.088					27.08	500	3.99	34.10		27.09	98	0.82
730	3.52	34.250					27.26	600	3.77	34.17		27.17	91	0.92
980	3.05	34.345					27.38	700	3.57	34.23		27.24	84	1.02
1228	2.70	34.433					27.48	800	3.37	34.28		27.30	78	1.10
								1000	3.02	34.35		27.39	70	1.26
								1200	2.74	34.42		27.47	62	1.41

a) Value interpolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; November 1, 1959; 0240 GCT; 49°17'N, 134°00'W; sounding, 1900 fm; wind, 200°, 15 kt; weather, overcast; sea, slight. 3

0	13.00	32.636	24.58	0	13.00	32.64	24.58	337	0.00
10	12.77	32.634	24.63	10	12.77	32.63	24.63	332	0.03
20	12.78a)	32.630a)	(24.62)	20	12.78	32.63	24.62	333	0.07
30	12.78	32.639	24.63	30	12.78	32.64	24.63	332	0.10
49	12.74	32.633	24.63	50	12.51	32.64	24.68	327	0.17
74	7.82	32.760	25.56	75	7.78	32.77	25.58	242	0.24
98	7.04	32.979	25.85	100	7.02	33.01	25.87	214	0.30
123	6.79	33.288	26.12	125	6.77	33.32	26.15	187	0.35
148	6.55	33.608	26.40	150	6.53	33.62	26.42	162	0.39
172	6.30	33.751	26.55	175	6.27	33.76	26.56	148	0.43
197	6.09	33.805	26.62	200	6.06	33.81	26.63	142	0.47
246	5.63	33.883	26.74	250	5.60	33.89	26.74	131	0.54
295	5.26	33.920	26.81	300	5.24	33.92	26.82	124	0.60
396	4.85	33.970	26.90	400	4.83	33.97	26.90	116	0.73
495	4.39	34.064	27.02	500	4.37	34.07	27.03	104	0.85
745	3.75	34.255	27.24	600	4.09	34.15	27.13	94	0.95
995	3.15	34.370	27.39	700	3.85	34.23	27.21	87	1.05
1245	2.71	34.451	27.49	800	3.60	34.28	27.28	80	1.14
				1000	3.14	34.37	27.39	70	1.30
				1200	2.78	34.44	27.48	61	1.45

CGS ST. CATHARINES; November 1, 1959; 1427 GCT; 49°04'N, 131°00'W; sounding, 1200 fm; wind, 220°, 25 kt; weather, partly cloudy; sea, rough. 2

0	13.00	32.592	24.55	0	13.00	32.59	24.55	340	0.00
8	12.98	32.578	24.54	10	12.98	32.58	24.54	340	0.03
20	12.98a)	32.580a)	(24.55)	20	12.98	32.58	24.55	340	0.07
25	12.97	32.581	24.55	30	12.97	32.58	24.55	340	0.10
42	12.97	32.581	24.55	50	12.21	32.63	24.73	322	0.17
64	11.09	32.703	24.99	75	9.39	32.75	25.32	266	0.24
85	8.02	32.780	25.55	100	7.51	32.92	25.74	226	0.31
106	7.33	32.976	25.80	125	7.06	33.11	25.95	206	0.36
127	7.03	33.127	25.96	150	6.89	33.52	26.29	174	0.41
148	6.90	33.501	26.27	175	6.71	33.71	26.46	158	0.45
170	6.78	33.688	26.44	200	6.41	33.79	26.57	148	0.49
212	6.28	33.827	26.61	250	5.57	33.89	26.75	130	0.56
238	5.73	33.877	26.72	300	5.12	33.92	26.83	123	0.63
268	5.35	33.899b)	(26.78)	400	4.53	33.98	26.94	112	0.75
386	4.59	33.966	26.92	500	4.14	34.08	27.07	100	0.86
540	4.00	34.118	27.11	600	3.85	34.16	27.15	92	0.96
739	3.56	34.240	27.25	700	3.64	34.22	27.22	86	1.06

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; November 2, 1959; 0119 GCT; 48°48'N, 128°00'W; sounding, 1200 fm; wind, 160°, 15 kt; weather, cloudy; sea, moderate.														
0	12.00	32.246					24.47	0	12.00	32.25		24.47	347	0.00
10	11.81	32.230					24.50	10	11.81	32.23		24.50	344	0.04
20	11.70a)	32.340a)					(24.60)	20	11.70	32.34		24.60	335	0.07
30	11.08	32.542					24.87	30	11.08	32.54		24.87	309	0.10
49	8.96	32.726					25.37	50	8.89	32.74		25.38	260	0.16
74	7.59	32.928					25.73	75	7.58	32.94		25.74	226	0.22
98	7.41	33.204					25.97	100	7.41	33.24		25.99	202	0.28
123	7.43	33.556					26.24	125	7.41	33.57		26.26	177	0.32
148	7.19	33.744					26.43	150	7.18	33.75		26.43	161	0.37
172	7.05	33.840					26.52	175	7.00	33.84		26.53	151	0.41
197	6.67	33.866					26.59	200	6.64	33.87		26.60	145	0.44
247	6.23	33.928					26.70	250	6.20	33.93		26.70	135	0.52
297	5.76	33.976					26.80	300	5.74	33.98		26.80	126	0.58
395	5.20	34.042					26.92	400	5.17	34.05		26.92	114	0.71
495	4.73	34.112					27.02	500	4.71	34.12		27.03	104	0.82
742	3.92	34.261					27.23	600	4.35	34.18		27.12	95	0.93
998	3.37	34.394					27.39	700	4.04	34.24		27.20	88	1.03
1000	3.37b)	34.395b)					(27.39)	800	3.78	34.30		27.27	81	1.12
								1000	3.37	34.40		27.39	70	1.29
CGS ST. CATHARINES; December 9, 1959; 0931 GCT; 48°47'N, 128°00'W; sounding, 1400 fm; wind, 120°, 16 kt; weather, partly cloudy; sea, slight.														
0	10.90	32.542					24.90	0	10.90	32.54		24.90	306	0.00
10	10.81	32.508					24.89	10	10.81	32.51		24.89	307	0.03
20	10.85	32.506					24.88	20	10.85	32.51		24.88	308	0.06
29	10.82	32.500					24.88	30	10.82	32.50		24.88	308	0.09
48	10.81	32.515					24.90	50	10.59	32.54		24.96	300	0.15
71	8.69	32.804					25.47	75	8.44	32.86		25.55	244	0.22
94	7.37	33.091					25.89	100	7.33	33.19		25.97	204	0.28
118	7.24	33.446					26.18	125	7.27	33.53		26.25	178	0.33
142	7.34	33.728					26.39	150	7.27	33.76		26.43	161	0.37
165	7.15	33.817					26.49	175	7.19	33.85		26.51	153	0.41
189	7.25	33.885					26.53	200	7.09	33.90		26.56	148	0.45
236	6.62	33.940					26.66	250	6.46	33.95		26.68	137	0.52
283	6.11	33.964					26.74	300	6.01	33.98		26.77	128	0.59
394	5.52	34.062					26.89	400	5.48	34.06		26.90	116	0.72
492	4.86	34.111					27.01	500	4.83	34.12		27.02	105	0.84
739	4.03	34.220					27.18	600	4.46	34.16		27.10	97	0.95
989	3.40	34.398					27.39	700	4.14	34.20		27.16	92	1.05
1000	3.38b)	34.405b)					(27.40)	800	3.86	34.27		27.24	84	1.14
								1000	3.38	34.40		27.40	69	1.31

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CGS ST. CATHARINES; December 9, 1959; 2059 GCT; 49°03'N, 131°00'W; sounding, 1500 fm; wind, 230°, 16 kt; weather, cloudy; sea, moderate. 2

0	11.30	32.614					24.89	0	11.30	32.61		24.89	307	0.00
8	11.15	32.558					24.87	10	11.17	32.56		24.87	310	0.03
17	11.21a)	32.568a)					(24.87)	20	11.23	32.57		24.87	310	0.06
26	11.26	32.578					24.87	30	11.28	32.59		24.87	310	0.09
38	11.32	32.609					24.88	50	11.24	32.62		24.90	306	0.16
60	11.18	32.626					24.92	75	11.23	32.59		24.88	308	0.23
80	11.24	32.576					24.87	100	11.35	32.60		24.87	309	0.31
100	11.35	32.597					24.87	125	9.11	32.76		25.37	262	0.38
120	9.67	32.712					25.24	150	7.18	32.99		25.83	218	0.44
140	7.53	32.906					25.72	175	6.67	33.36		26.19	184	0.50
160	6.85	33.069					25.94	200	6.40	33.79		26.57	148	0.54
200	6.40	33.790					26.57	250	5.72	33.88		26.72	133	0.61
239	5.84	33.867					26.70	300	5.22	33.92		26.81	125	0.68
388	4.52	33.975					26.94	400	4.49	33.99		26.95	111	0.80
436	4.40	34.029					26.99	500	4.23	34.09		27.06	101	0.91
672	3.85	34.209					27.19	600	3.99	34.16		27.14	93	1.01
884	3.38	34.351					27.35	700	3.78	34.23		27.22	86	1.11
1093	2.92	34.420					27.45	800	3.55	34.30		27.30	78	1.20
								1000	3.11	34.39		27.41	68	1.36

CGS ST. CATHARINES; December 15, 1959; 2326 GCT; 50°00'N, 145°30'W; sounding, 2200 fm; wind, 220°, 24 kt; weather, showers of rain and snow; sea, very rough. 501

0	7.30	32.800	6.07	33.3	0.34	25.67	0	7.30	32.80	6.07	25.67	233	0.00	
10	7.41	32.694	6.03	26.5	0.23	25.57	10	7.41	32.69	6.03	25.57	242	0.02	
20	7.40a)	32.689a)	6.03a)	26.8a)	0.23a)	(25.57)	20	7.40	32.69	6.03	25.57	242	0.05	
29	7.39	32.684	6.01	27.1	0.24	25.57	30	7.39	32.68	6.01	25.57	242	0.07	
49	7.38	32.688	5.99	39.1	0.25	25.57	50	7.38	32.69	5.99	25.57	242	0.12	
73	7.39	32.698	5.99	32.6	0.27	25.58	75	7.21	32.72	6.00	25.62	238	0.18	
97	5.52	32.944	6.07	43.6	0.04	26.01	100	5.43	32.99	6.05	26.06	196	0.24	
117	4.96	33.238	5.95	42.0	0.03	26.31	125	5.11	33.43	5.22	26.45	159	0.28	
136	5.30	33.686	4.28	61.3	<0.01	26.62	150	5.20	33.77	4.12	26.70	135	0.32	
156	5.16	33.803	4.05	68.9	-	26.73	175	4.72	33.81	3.83	26.79	127	0.35	
175	4.72	33.814	3.83	73.5	-	26.79	200	4.59	33.82	3.51	26.81	125	0.39	
224	4.48	33.830	3.24	83.6	-	26.83	250	4.20	33.85	2.90	26.87	119	0.45	
274	3.96	33.869	2.61	99.0	-	26.91								

CGS ST. CATHARINES; December 18, 1959; 1908 GCT; 49°50'N, 145°04'W; sounding, 2200 fm; wind, 290°, 12 kt; weather, intermittent moderate fall of snowflakes; sea, slight. 502

0	7.30	32.780	6.57	22.7		25.65	0	7.30	32.78	6.57	25.65	235	0.00	
10	7.95	32.697	6.57	22.5		25.50	10	7.95	32.70	6.57	25.50	249	0.02	
20	7.98a)	32.695a)	6.55a)	-		(25.49)	20	7.98	32.70	6.55	25.49	250	0.05	
30	8.01	32.693	6.53	20.2		25.48	30	8.01	32.69	6.53	25.48	251	0.08	
50	8.00	32.692a)	6.59	26.2		(25.49)	50	8.00	32.69	6.59	25.49	250	0.12	
75	8.00	32.692	6.54	21.4		25.49	75	8.00	32.69	6.54	25.49	250	0.19	
100	7.42	32.784	6.56	24.9		25.64	100	7.42	32.78	6.56	25.64	236	0.25	
125	4.85	33.017	6.65	34.4		26.14	125	4.85	33.02	6.65	26.14	188	0.30	
150	5.18	33.566	5.00	47.8		26.54	150	5.18	33.57	5.00	26.54	150	0.35	
175	5.23	33.813	4.09	55.8		26.73	175	5.23	33.81	4.09	26.73	132	0.38	
200	4.83	33.813	3.82	56.3		26.78	200	4.83	33.81	3.82	26.78	128	0.42	
250	4.61	33.898	2.30	84.8		26.87	250	4.61	33.90	2.30	26.87	119	0.48	
300	3.86	33.994	1.57	95.8		27.02	300	3.86	33.99	1.57	27.02	105	0.54	
400	3.84	34.021	1.44	103		27.05	400	3.84	34.02	1.44	27.05	102	0.64	
500	3.86	34.123	1.10	116		27.13	500	3.86	34.12	1.10	27.13	94	0.75	
750	3.35	34.282	0.58	136		27.30	600	3.63	34.19	0.86	27.20	88	0.84	
1000	2.94	34.371	0.57	153		27.41	700	3.44	34.26	0.67	27.27	81	0.93	
1250	2.58	34.464	0.58	163		27.52	800	3.26	34.30	0.58	27.33	75	1.02	
							1000	2.94	34.37	0.57	27.41	68	1.18	
							1200	2.65	34.45	0.58	27.50	59	1.32	

a) Value interpolated graphically.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
503	CGS ST. CATHARINES; December 21, 1959; 1909 GCT; 50°02'N, 145°06'W; sounding, 2200 fm; wind, 260°, 25 kt; weather, moderate to heavy snow showers; sea, moderate.													
0	7.40	32.912	6.63		25.1	0.30	25.74	0	7.40	32.91	6.63	25.74	226	0.00
10	7.61	32.699	6.54		26.2	0.26	25.55	10	7.61	32.70	6.54	25.55	244	0.02
20	7.62a)	32.698a)	6.55a)		24.4a)	0.26a)	(25.54)	20	7.62	32.70	6.55	25.54	245	0.05
30	7.63a)	32.698a)	6.55a)		22.6a)	0.26a)	(25.54)	30	7.63	32.70	6.55	25.54	245	0.07
49	7.65	32.697	6.56		21.0	0.26	25.54	50	7.65	32.70	6.56	25.54	245	0.12
69	7.65	32.698	6.50		20.6	0.26	25.54	75	7.64	32.70	6.51	25.54	245	0.18
79	7.64	32.703	6.51		20.9	0.26	25.55	100	5.03	32.94	6.59	26.06	196	0.24
88	7.65	32.695	6.59		19.4	0.24	25.54	125	4.86	33.08	6.54	26.20	183	0.29
98	5.05	32.926	6.59		30.3	0.04	26.05	150	4.92	33.48	6.07	26.51	153	0.33
122	4.85	33.032	6.56		32.8	0.02	26.16	175	5.10	33.80	4.00	26.73	132	0.37
147	4.89	33.438	6.38		42.6	0.02	26.47	200	4.81	33.82	3.66	26.79	127	0.40
171	5.15	33.794	4.05		53.9	<0.01	26.72	250	4.22	33.84	3.02	26.86	120	0.46
196	4.86	33.820	3.72		59.0	-	26.78	300	3.89	33.88	0.00	26.93	113	0.52
246	4.25	33.835	3.08		67.1	-	26.86							
294	3.93	33.878	2.41		78.6	-	26.92							
300	3.89b)	33.883b)	0.00		-	-	(26.93)							
504	CGS ST. CATHARINES; December 26 and 28, 1959; 1920, 1920 GCT; 50°02'N, 145°12'W; sounding, 2200 fm; wind, 290°, 35 kt; weather, moderate to heavy showers of hail; sea, rough.													
0	7.40	32.823	6.72		22.4	0.28	25.67	0	7.40	32.82	6.72	25.67	233	0.00
9	7.26	32.696	6.75		21.7	0.20	25.59	10	7.26	32.70	6.75	25.59	240	0.02
18	7.28a)	32.699a)	6.75a)		22.0a)	-	(25.59)	20	7.28	32.70	6.75	25.59	240	0.05
26	7.29	32.702	6.76		22.3	0.26	25.59	30	7.29	32.70	6.74	25.59	240	0.07
44	7.30	32.709	6.69		23.1	0.25	25.60	50	7.30	32.71	6.69	25.60	240	0.12
65	7.29	32.713	6.68		22.5	0.25	25.60	75	7.29	32.72	6.69	25.61	239	0.18
87	7.30	32.728	6.70		22.4	0.28	25.61	100	5.71	32.98	6.74	26.01	201	0.24
108	4.82	33.118	6.76		35.4	0.01	26.23	125	4.94	33.29	5.92	26.35	168	0.28
129	4.97	33.322	5.75		42.0	<0.01	26.37	150	5.00	33.64	4.85	26.62	143	0.32
151	5.00	33.649	4.80		49.7	-	26.63	175	5.10	33.81	4.16	26.74	131	0.36
172	5.15	33.809	4.20		55.4	-	26.74	200	4.72	33.83	3.77	26.80	126	0.39
214	4.53	33.843	3.58		65.0	-	26.83	250	4.18	33.87	3.11	26.89	117	0.45
257	4.12	33.877	3.02		72.2	-	26.90	300	3.98	33.92	2.55	26.95	111	0.51
								400	3.85	34.01	1.67	27.04	103	0.62
355	3.83	33.956	2.04		84.9	-	27.00	500	3.77	34.13	1.16	27.14	93	0.73
451	3.87	34.073	1.30		92.0	-	27.08	600	3.58	34.22	0.91	27.23	85	0.82
693	3.44	34.296	0.72		110	-	27.30	700	3.43	34.30	0.71	27.31	77	0.91
940	3.00	34.381	0.53		123	-	27.41	800	3.23	34.34	0.63	27.36	73	0.99
1200	2.65	34.454	0.53c)		132	-	27.50	1000	2.91	34.40	0.53	27.44	65	1.14
								1200	2.65	34.45	0.53	27.50	59	1.28
505	CGS ST. CATHARINES; January 8, 1960; 1946 GCT; 49°58'N, 145°03'W; sounding, 2200 fm; wind, 120°, 15 kt; weather, fog; sea, moderate.													
0	6.80	32.724	6.88		22.3	0.28	25.68	0	6.80	32.72	6.88	25.68	232	0.00
10	6.84	32.713	6.81		21.3	0.24	25.66	10	6.84	32.71	6.81	25.66	234	0.02
19	6.84a)	32.715a)	6.83a)		21.4a)	0.24a)	(25.66)	20	6.84	32.72	6.83	25.66	234	0.05
29	6.84a)	32.717a)	6.85a)		21.5a)	0.24a)	(25.67)	30	6.84	32.72	6.85	25.67	233	0.07
49	6.84	32.720	6.89		21.8	0.25	25.67	50	6.84	32.72	6.89	25.67	233	0.12
63	6.81	32.713	6.85		20.4	0.25	25.67	75	6.82	32.71	6.84	25.67	233	0.18
73	6.82	32.712	6.84		21.8	0.26	25.66	100	6.64	32.75	6.83	25.72	228	0.24
97	6.79	32.736	6.83		22.2	0.25	25.69	125	5.45	33.04	6.80	26.10	192	0.29
112	6.06	32.811	6.83		24.4	0.18	25.84	150	5.00	33.53	5.33	26.54	150	0.33
136	4.98	33.225	6.76		50.0	-	26.29	175	4.89	33.81	4.01	26.77	128	0.37
161	5.01	33.757	4.29		57.6	0.01	26.71	200	4.61	33.88	3.57	26.85	121	0.40
186	4.81	33.856	3.81		67.4	-	26.81	250	4.09	33.95	2.97	26.96	110	0.46
235	4.16	33.929	3.05		68.0	-	26.94	300	3.88	34.01	2.73	27.03	104	0.51
284	3.94	33.989d)	2.80		70.1	-	(27.01)							
300	3.88b)	34.006b)	2.73b)		-	-	(27.03)							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.
c) Value extrapolated graphically.
d) Value interpolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

506

CGS ST. CATHARINES; January 6, 1960; 1908 GCT; 49°59'N, 145°02'W; sounding, 2200 fm; wind, 270°, 10 kt; weather, cloudy; sea, slight.

0	6.40	32.856	6.99	21.6		25.83	0	6.40	32.86	6.99	25.83	218	0.00
10	6.68	32.710a)	6.98	21.8		(25.68)	10	6.68	32.71	6.98	25.68	232	0.02
20	6.67a)	32.710a)	6.98a)	21.9a)		(25.68)	20	6.67	32.71	6.98	25.68	232	0.05
29	6.67a)	32.710a)	6.97a)	22.0a)		(25.68)	30	6.67	32.71	6.97	25.68	232	0.07
49	6.66	32.735	6.97	22.2		25.70	50	6.66	32.73	6.97	25.70	230	0.12
73	6.63	32.708	6.94	22.0		25.69	75	6.62	32.71	6.93	25.69	231	0.17
88	6.56	32.721	6.90	22.8		25.71	100	6.17	32.95	6.82	25.93	208	0.23
98	6.29	32.934	6.83	24.4		25.91	125	5.00	33.14	6.51	26.22	181	0.28
122	4.99	33.075	6.71	29.9		26.17	150	5.07	33.58	5.04	26.56	148	0.32
147	5.09	33.541	5.16	42.1		26.53	175	4.93	33.82	4.12	26.77	128	0.36
171	4.97	33.820	4.20	51.0		26.77	200	4.68	33.83	3.66	26.80	126	0.39
196	4.73	33.823	3.72	57.4		26.80	250	4.20	33.87	3.05	26.89	117	0.45
245	4.23	33.867	3.07	65.6		26.88	300	3.91	33.92	2.76	26.96	110	0.51
295	3.92	33.917b)	2.81	66.5		(26.96)	400	3.84	34.02	1.74	27.05	102	0.62
351	3.86	33.964	2.18	78.9		27.00	500	3.72	34.12	1.22	27.14	93	0.72
446	3.82	34.074	1.36	88.1		27.09	600	3.56	34.21	1.00	27.22	86	0.82
684	3.45	34.265	0.84	106		27.28	700	3.41	34.27	0.83	27.29	79	0.90
928	2.97	34.372	0.76	118		27.41	800	3.20	34.32	0.80	27.35	74	0.99
1178	2.66	34.451	0.64	121		27.50	1000	2.87	34.40	0.73	27.44	65	1.14
1200	2.64c)	34.457c)	0.63c)	-		(27.51)	1200	2.64	34.46	0.63	27.51	58	1.28

507

CGS ST. CATHARINES; January 8, 1960; 1910 GCT; 50°03'N, 145°00'W; sounding, 2200 fm; wind, 270°, 30 kt; weather, overcast; sea, rough.

0	6.60	32.860	7.03	22.4	0.30	25.81	0	6.60	32.86	7.03	25.81	220	0.00
9	6.72	32.707	7.02	20.8	0.26	25.67	10	6.72	32.71	7.02	25.67	233	0.02
17	6.72a)	32.706a)	7.02a)	21.0a)	0.26a)	(25.67)	20	6.72	32.70	7.02	25.67	233	0.05
26	6.72a)	32.704a)	7.01a)	21.2a)	0.27a)	(25.67)	30	6.72	32.70	7.01	25.67	233	0.07
43	6.72	32.702	7.01	21.6	0.28	25.67	50	6.71	32.70	7.00	25.67	233	0.12
65	6.70a)	32.709	6.99	22.9	0.27	(25.68)	75	6.64	32.71	7.00	25.69	231	0.18
87	6.57	32.717	7.01	23.2	0.27	25.70	100	6.60	32.72	7.02	25.70	230	0.23
96	6.59	32.722	7.03	22.5	0.27	25.70	125	4.98	33.05	6.75	26.16	186	0.29
104	6.60	32.717	7.01	22.7	0.26	25.70	150	5.09	33.42	5.69	26.44	160	0.33
122	4.97	33.005	6.89	31.4	0.02	26.12	175	5.20	33.73	4.65	26.67	138	0.37
148	5.08	33.396	5.78	38.1	0.01	26.42	200	4.91	33.79	4.13	26.75	130	0.40
174	5.21	33.726	4.67	49.3	0.01	26.66	250	4.36	33.84	3.44	26.85	121	0.47
219	4.71	33.830	3.77	61.1	-	26.80							
264	4.22	33.845	3.29	65.8	-	26.87							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

	OBSERVED						COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
508	CGS ST. CATHARINES; January 11, 1960; 1904 GCT; 50°02'N, 145°07'W; sounding, 2200 fm; wind, 260°, 25 kt; weather, overcast; sea, moderate.														
	0	6.50	32.969	6.89	20.1		25.91	0	6.50	32.97	6.89	25.91	210	0.00
	10	6.78	32.666	6.87	19.3		25.63	10	6.78	32.67	6.87	25.63	237	0.02
	19	6.80a)	32.679a)	6.87a)	19.6a)		(25.64)	20	6.80	32.68	6.87	25.64	236	0.05
	28	6.81a)	32.692a)	6.87a)	19.9a)		(25.65)	30	6.81	32.70	6.87	25.65	235	0.07
	48	6.84	32.719	6.87	20.4		25.67	50	6.84	32.72	6.87	25.67	233	0.12
	72	6.82	32.718	6.85	19.5		25.67	75	6.82	32.72	6.85	25.67	233	0.18
	96	6.82	32.716	6.83	20.0		25.67	100	6.46	32.78	6.80	25.76	224	0.23
	110	5.62	32.924	6.72	25.3		25.98	125	5.09	33.08	6.64	26.17	185	0.29
	125	5.09	33.084	6.64	28.6		26.17	150	5.05	33.51	5.25	26.51	153	0.33
	144	5.07	33.418	5.56	36.7		26.44	175	4.96	33.79	4.21	26.74	131	0.36
	168	5.00	33.778	4.40	47.9		26.73	200	4.74	33.83	3.67	26.80	126	0.40
	193	4.85	33.824	3.75	54.4		26.78	250	4.13	33.85	3.10	26.88	118	0.46
	242	4.18	33.845	3.23	64.2		26.87	300	3.90	33.90	2.48	26.95	111	0.52
	291	3.91	33.891	2.54	71.4		26.94	400	3.83	34.01	1.65	27.04	103	0.63
	358	3.84	33.966	2.05	79.9		27.00	500	3.72	34.11	1.11	27.13	94	0.73
	450	3.82	34.066	1.22	-		27.08	600	3.56	34.19	0.92	27.21	87	0.83
	684	3.44	34.252	0.77	108		27.27	700	3.41	34.26	0.76	27.28	80	0.92
	922	3.03	34.366	0.66	120		27.40	800	3.23	34.31	0.72	27.34	74	1.00
	1166	2.67	34.444	0.67	126		27.49	1000	2.91	34.39	0.66	27.43	66	1.16
	1200	2.63b)	34.454b)	0.67b)	-		(27.50)	1200	2.63	34.45	0.67	27.50	59	1.30
509	CGS ST. CATHARINES; January 16, 1960; 1920 GCT; 50°03'N, 144°55'W; sounding, 2200 fm; wind, 320°, 16 kt; weather, overcast; sea, rough.														
	0	6.40	32.716	6.83	20.1	0.32	25.72	0	6.40	32.72	6.83	25.72	228	0.00
	9	6.59	32.710	6.85	20.4	0.24	25.69	10	6.59	32.71	6.85	25.69	231	0.02
	18	6.60a)	32.711a)	6.85a)	20.6a)	0.24a)	(25.69)	20	6.60	32.71	6.85	25.69	231	0.05
	28	6.61a)	32.712a)	6.84a)	20.7a)	0.24a)	(25.69)	30	6.61	32.71	6.84	25.69	231	0.07
	46	6.64	32.713	6.83	21.0	0.23	25.69	50	6.64	32.72	6.84	25.69	231	0.12
	69	6.63	32.732	6.88	19.6	0.25	25.71	75	6.62	32.73	6.88	25.70	230	0.17
	92	6.61	32.719	6.87	20.7	0.24	25.70	100	6.62	32.73	6.85	25.70	230	0.23
	97	6.61	32.725	6.87	21.2	0.24	25.70	125	5.38	33.13	6.23	26.17	185	0.28
	102	6.62	32.728	6.85	20.6	0.24	25.70	150	5.74	33.45	4.92	26.38	166	0.33
	120	5.27	33.034	6.54	29.9	<0.01	26.11	175	5.50	33.67	4.30	26.59	146	0.37
	139	5.65	33.368	5.41	35.2	-	26.33	200	5.01	33.80	4.02	26.75	130	0.40
	163	5.84	33.544	4.37	36.9	-	26.44	250	4.41	33.84	3.32	26.85	121	0.47
	187	5.19	33.788	4.23	47.2	-	26.72							
	284	4.07	33.870	2.91	65.3	-	26.90							
510	CGS ST. CATHARINES; January 19, 1960; 1918 GCT; 50°00'N, 145°01'W; sounding, 2200 fm; wind, 090°, 27 kt; weather, partly cloudy; sea, rough.														
	0	6.50	32.924	6.93	21.6		25.87	0	6.50	32.92	6.93	25.87	214	0.00
	10	6.49	32.720	6.96	20.6		25.71	10	6.49	32.72	6.96	25.71	229	0.02
	19	6.49a)	32.722a)	6.93a)	20.5a)		(25.72)	20	6.49	32.72	6.93	25.72	228	0.04
	28	6.49a)	32.724a)	6.91a)	20.4a)		(25.72)	30	6.49	32.75	6.91	25.72	228	0.07
	47	6.49	32.728	6.88	20.2		25.72	50	6.49	32.73	6.89	25.72	228	0.11
	71	6.48	32.727	6.92	20.7		25.72	75	6.48	32.73	6.92	25.72	228	0.17
	96	6.47	32.738	6.92	20.9		25.73	100	6.22	32.79	6.88	25.81	220	0.23
	120	5.07	33.044	6.70	27.4		26.14	125	5.08	33.08	6.57	26.17	185	0.28
	144	5.10	33.230	6.16	31.5		26.28	150	5.14	33.36	5.76	26.38	166	0.32
	168	5.25	33.706	4.64	41.8		26.64	175	5.19	33.74	4.44	26.68	137	0.36
	192	5.04	33.826	3.99	50.2		26.76	200	4.93	33.82	3.93	26.77	128	0.40
	242	4.39	33.816	3.67	52.0		26.83	250	4.33	33.82	3.61	26.84	122	0.46
	291	4.07	33.834	3.28	56.5		26.87	300	4.05	33.84	3.16	26.89	117	0.52
	367	3.88	33.917	2.34	67.7		26.96	400	3.86	33.95	2.15	26.99	108	0.64
	462	3.82	33.995	1.84	75.3		27.03	500	3.74	34.05	1.67	27.08	99	0.75
	700	3.42	34.279	0.95	98.3		27.29	600	3.57	34.17	1.28	27.19	89	0.85
	942	2.99	34.382	0.84	110		27.41	700	3.42	34.28	0.95	27.29	79	0.94
	1190	2.65	34.465	0.76	116		27.51	800	3.23	34.32	0.91	27.35	74	1.02
	1200	2.64b)	34.468b)	0.76b)	-		(27.51)	1000	2.90	34.40	0.82	27.44	65	1.17
								1200	2.64	34.47	0.76	27.51	58	1.31

650

a) Value interpolated graphically.

b) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; January 22, 1960; 1640 GCT; 49°50'N, 142°20'W; sounding, 2200 fm; wind, 030°, 10 kt; weather, partly cloudy; sea, moderate.														6
0	6.30	32.747					25.76	0	6.30	32.75		25.76	224	0.00
10	6.15	32.730					25.76	10	6.15	32.73		25.76	224	0.02
20	6.16a)	32.732a)					(25.77)	20	6.16	32.73		25.77	223	0.04
30	6.17	32.734					25.77	30	6.17	32.73		25.77	223	0.07
50	6.13	32.728					25.77	50	6.13	32.73		25.77	223	0.11
75	5.93	32.724					25.79	75	5.93	32.72		25.79	222	0.17
100	5.82	32.724					25.80	100	5.82	32.72		25.80	221	0.22
125	5.12	33.262					26.31	125	5.12	33.26		26.31	172	0.28
150	5.31	33.666					26.60	150	5.31	33.67		26.60	145	0.32
175	5.12	33.808					26.74	175	5.12	33.81		26.74	131	0.35
200	4.79	33.833					26.80	200	4.79	33.83		26.80	126	0.38
250	4.28	33.838					26.86	250	4.28	33.84		26.86	120	0.45
300	4.15	33.907					26.92	300	4.15	33.91		26.92	114	0.51
400	3.98	33.998					27.01	400	3.98	34.00		27.01	106	0.62
500	3.83	34.136					27.14	500	3.83	34.14		27.14	93	0.72
750	3.28	34.306					27.33	600	3.58	34.21		27.22	86	0.82
1000	2.88	34.396					27.44	700	3.37	34.28		27.30	78	0.91
								800	3.19	34.33		27.35	74	0.99
								1000	2.88	34.40		27.44	65	1.14
CGS ST. CATHARINES; January 23, 1960; 0445 GCT; 49°37'N, 139°30'W; sounding, 1780 fm; wind, 030°, 20 kt; weather, partly cloudy; sea, rough.														5
0	6.80	32.746					25.69	0	6.80	32.75		25.69	231	0.00
8	6.76	32.719					25.68	10	6.76	32.72		25.68	232	0.02
17	6.77a)	32.718a)					(25.68)	20	6.77	32.72		25.67	233	0.05
26	6.78	32.716					25.67	30	6.78	32.72		25.67	233	0.07
44	6.77	32.717a)					(25.68)	50	6.76	32.72		25.68	232	0.12
67	6.72	32.717					25.68	75	6.66	32.73		25.70	230	0.18
91	6.56	32.759					25.74	100	6.02	32.88		25.90	211	0.23
115	5.20	33.062					26.14	125	5.34	33.16		26.20	183	0.28
139	5.51	33.294					26.29	150	5.68	33.49		26.42	162	0.32
163	5.86	33.708					26.57	175	5.80	33.77		26.63	142	0.36
187	5.75	33.834					26.68	200	5.53	33.84		26.71	134	0.40
235	4.99	33.845					26.78	250	4.80	33.85		26.81	125	0.46
284	4.42	33.860					26.86	300	4.33	33.87		26.88	118	0.53
338	4.14	33.900					26.92	400	4.03	34.11		27.09	98	0.64
430	3.98	34.195					27.17	500	3.86	34.23		27.21	87	0.74
669	3.62	34.288b)					(27.28)	600	3.71	34.26		27.25	83	0.83
915	3.11	34.354					27.38	700	3.55	34.30		27.30	78	0.91
								800	3.33	34.33		27.34	74	1.00

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.

4 CGS ST. CATHARINES; January 23, 1960; 1620 GCT; 49°26'N, 136°40'W; sounding, 2000 fm; wind, 090°, 27 kt; weather, intermittent slight drizzle; sea, very rough.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	8.00	32.766					25.54	0	8.00	32.77		25.54	245	0.00
10	8.05	32.720					25.50	10	8.05	32.72		25.50	249	0.02
20	8.04a)	32.722a)					(25.50)	20	8.04	32.72		25.50	249	0.05
29	8.04	32.724					25.50	30	8.04	32.72		25.50	249	0.08
48	8.04	32.729					25.51	50	8.04	32.73		25.51	248	0.12
73	8.03	32.734					25.51	75	8.01	32.74		25.52	247	0.19
97	7.86	32.755					25.55	100	7.67	32.80		25.62	238	0.25
122	6.44	33.084					26.01	125	6.43	33.12		26.04	198	0.30
146	6.38	33.388					26.25	150	6.36	33.46		26.31	172	0.35
171	6.25	33.787					26.58	175	6.20	33.78		26.59	146	0.39
196	5.96	33.777					26.61	200	5.89	33.79		26.63	142	0.43
245	5.20	33.880					26.79	250	5.16	33.88		26.79	127	0.50
294	4.88	33.924					26.86	300	4.85	33.93		26.87	119	0.56
388	4.52	34.008					26.96	400	4.47	34.03		26.99	108	0.68
489	4.13	34.150					27.12	500	4.10	34.16		27.13	94	0.79
742	3.50	34.276					27.28	600	3.82	34.21		27.20	88	0.88
994	3.06	34.419					27.44	700	3.59	34.26		27.26	82	0.97
1000	3.05b)	34.422b)					(27.44)	800	3.39	34.31		27.32	76	1.06
								1000	3.05	34.42		27.44	65	1.22

3 CGS ST. CATHARINES; January 24, 1960; 0209 GCT; 49°17'N, 134°00'W; sounding, 1900 fm; wind, 070°, 20 kt; weather, overcast; sea, moderate.

0	8.10	32.768					25.53	0	8.10	32.77		25.53	246	0.00
10	8.10	32.709					25.48	10	8.10	32.71		25.48	251	0.02
20	8.09a)	32.712a)					(25.49)	20	8.09	32.71		25.49	250	0.05
29	8.08	32.714					25.49	30	8.08	32.71		25.49	250	0.08
48	8.08	32.714a)					(25.49)	50	8.08	32.72		25.49	250	0.13
72	8.13	32.774					25.53	75	7.94	32.82		25.59	240	0.19
96	6.77	33.064					25.95	100	6.73	33.08		25.97	204	0.24
121	6.54	33.174					26.06	125	6.61	33.23		26.10	192	0.30
145	6.91	33.505					26.28	150	6.85	33.56		26.33	170	0.34
169	6.62	33.779					26.53	175	6.50	33.79		26.56	148	0.38
194	6.14	33.829					26.63	200	6.06	33.84		26.65	140	0.42
243	5.55	33.871					26.74	250	5.49	33.88		26.75	130	0.49
292	5.16	33.908					26.81	300	5.10	33.92		26.83	123	0.55
400	4.46	33.998					26.96	400	4.46	34.00		26.96	110	0.68
500	4.17	34.069					27.05	500	4.17	34.07		27.05	102	0.79
750	3.54	34.247					27.26	600	3.89	34.15		27.14	93	0.89
1000	3.15	34.374					27.39	700	3.65	34.22		27.22	86	0.98
								800	3.45	34.28		27.29	79	1.08
								1000	3.15	34.37		27.39	70	1.24

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CGS ST. CATHARINES; January 24, 1960; 1153 GCT; 49°03'N, 131°00'W; sounding, 1500 fm; wind, 360°, 25 kt; weather, intermittent moderate rain; sea, rough.														
0	8.60	32.807					25.49	0	8.60	32.81		25.49	250	0.00
10	9.03	32.768					25.39	10	9.03	32.77		25.39	260	0.03
20	9.03a)	32.765a)					(25.39)	20	9.03	32.76		25.39	260	0.05
29	9.02	32.762					25.39	30	9.02	32.76		25.39	260	0.08
48	9.03	32.768					25.39	50	9.02	32.77		25.39	260	0.13
73	8.96	32.780					25.41	75	8.78	32.83		25.47	252	0.20
97	7.07	33.283					26.08	100	7.08	33.31		26.10	192	0.25
122	7.13	33.474					26.22	125	7.07	33.49		26.25	178	0.30
146	6.70	33.626					26.40	150	6.67	33.65		26.42	162	0.34
171	6.53	33.751					26.52	175	6.50	33.76		26.53	151	0.38
195	6.35	33.811					26.59	200	6.27	33.82		26.61	144	0.42
244	5.66	33.900					26.75	250	5.60	33.91		26.76	129	0.49
294	5.18	33.947					26.84	300	5.13	33.95		26.85	121	0.56
388	4.50	34.017					26.97	400	4.48	34.03		26.98	109	0.67
487	4.34	34.087					27.05	500	4.30	34.10		27.06	101	0.78
738	3.66	34.256					27.25	600	4.00	34.17		27.15	92	0.89
992	3.14	34.395					27.41	700	3.75	34.23		27.23	85	0.98
1000	3.13b)	34.399b)					(27.42)	800	3.52	34.29		27.30	78	1.07
								1000	3.13	34.40		27.42	67	1.23
CGS ST. CATHARINES; January 24, 1960; 2226 GCT; 48°48'N, 128°00'W; sounding, 1300 fm; wind, 210°, 17 kt; weather, overcast; sea, moderate.														
0	8.30	32.594					25.36	0	8.30	32.59		25.36	262	0.00
9	8.30	32.559					25.34	10	8.30	32.56		25.34	264	0.03
18	8.28a)	32.558a)					(25.34)	20	8.28	32.56		25.34	264	0.05
27	8.26	32.558					25.34	30	8.26	32.56		25.34	264	0.08
45	8.28	32.573					25.35	50	8.28	32.57		25.35	263	0.13
68	8.27	32.574					25.35	75	8.15	32.83		25.57	242	0.20
92	7.90	33.387					26.04	100	7.83	33.49		26.14	188	0.25
115	7.71	33.667					26.29	125	7.62	33.72		26.35	168	0.30
139	7.51	33.788					26.41	150	7.40	33.83		26.47	157	0.34
163	7.27	33.883					26.52	175	7.17	33.88		26.54	150	0.38
186	7.09	33.880					26.55	200	6.93	33.90		26.58	146	0.42
234	6.59	33.944					26.66	250	6.44	33.96		26.69	136	0.49
282	6.18	33.983					26.75	300	6.05	33.99		26.77	128	0.56
386	5.52	34.025					26.86	400	5.45	34.04		26.88	118	0.69
483	5.08	34.102					26.98	500	5.00	34.12		27.00	107	0.80
725	4.16	34.276					27.22	600	4.59	34.20		27.11	96	0.91
968	3.58	34.398					27.37	700	4.24	34.26		27.20	88	1.01
								800	3.96	34.32		27.27	81	1.11

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; January 20, 1959; 0324 GCT;[a] 48°31'N, 125°30'W; sounding, 65 fm; wind, 300°, 30 kt; weather, clear; sea, rough.										1
0	8.20	30.652	6.03	23.86	0	8.20	30.65	23.86	405	0.00
9	8.32	30.679	6.62	23.86	10	8.34	30.70	23.88	404	0.04
24	8.87	31.371	6.55	24.32	20	8.68	31.11	24.15	378	0.08
48	9.85	32.392	6.54	24.96	30	9.10	31.64	24.49	345	0.12
71	9.92	32.582	6.18	25.10	50	9.89	32.44	24.99	298	0.18
95	9.89	32.749	5.59	25.24	75	9.92	32.61	25.12	286	0.25
100	(9.87)b)	(32.780)b)	-	(25.26)	100	9.87	32.78	25.26	274	0.32
CNAV OSHAWA; January 20, 1959; 0628 GCT; 48°34'N, 126°00'W; sounding, 90 fm; wind, 310°, 25 kt; weather, clear; sea, moderate.										2
0	9.00	31.925	6.56	24.74	0	9.00	31.92	24.74	322	0.00
9	9.25	31.892	6.50	24.67	10	9.28	31.89	24.67	329	0.03
23	(9.69)c)	31.946	6.47	(24.64)	20	9.59	31.92	24.64	331	0.07
46	10.06	32.444	6.23	24.97	30	9.85	32.04	24.69	326	0.10
69	9.97	32.564	5.89	25.08	50	10.08	32.49	25.00	297	0.16
91	9.63	32.737	5.39	25.27	75	9.90	32.61	25.12	286	0.24
113	10.05	33.042	4.97	25.44	100	9.71	32.85	25.34	266	0.30
136	9.00	33.426	3.76	25.91	125	9.69	33.23	25.65	238	0.37
CNAV OSHAWA; January 20, 1959; 1016 GCT; 48°35'N, 126°35'W; sounding, 750 fm; wind, 320°, 25 kt; weather, partly cloudy; sea, moderate.										3
0	8.30	32.442	6.57	25.25	0	8.30	32.44	25.25	273	0.00
8	8.79	32.405	6.52	25.14	10	8.86	32.40	25.13	285	0.03
22	8.80	32.402	6.50	25.14	20	8.86	32.40	25.13	285	0.06
44	8.82	32.402	6.50	25.14	30	8.81	32.40	25.14	284	0.08
66	9.11	33.362	4.27	25.84	50	8.87	32.57	25.26	273	0.14
88	8.59	33.675	3.35	26.17	75	9.00	33.57	26.02	201	0.20
109	8.23	33.764	2.82	26.29	100	8.37	33.75	26.26	179	0.25
131	8.17	33.792	2.84	26.32	125	8.15	33.79	26.32	173	0.29
195	7.71	33.848	2.55	26.43	150	8.08	33.81	26.35	171	0.34
219	7.65	33.890	2.30	26.47	175	7.90	33.83	26.40	167	0.38
289	7.12	33.971	2.30	26.61	200	7.69	33.86	26.44	163	0.42
382	6.39	34.030	1.88	26.76	250	7.48	33.93	26.53	155	0.50
474	5.70	34.040	1.33	26.85	300	7.04	33.98	26.63	146	0.58
561	5.01	34.129	0.87	27.01	400	6.25	34.04	26.78	133	0.72
736	4.19	34.240	0.73	27.18	500	5.50	34.06	26.89	123	0.85
918	3.72	34.346	0.32	27.32	600	4.76	34.16	27.06	107	0.96
1112	3.30	34.430	0.50	27.42	700	4.30	34.22	27.16	98	1.07
					800	3.98	34.28	27.24	91	1.16
					1000	3.53	34.39	27.37	80	1.34

a) Although not indicated in the tabulation, two casts were made at each station, the first to a depth of 300 meters and the second to a maximum depth of 1500 meters. The time reported is the time of the messenger release of the shallow cast. The deeper cast was usually made 20 to 30 minutes later.

b) Value extrapolated by three-point parabolic method.

c) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
4	CNAV OSHAWA; January 20, 1959; 1846 GCT; 48°41'N, 127°59'W; sounding, 1380 fm; wind, 300°, 5 kt; weather, overcast; sea, moderate.									
0	8.80	32.418	6.64	25.15	0	8.80	32.42	25.15	282	0.00
10	8.74	32.399	6.57	25.15	10	8.74	32.40	25.15	283	0.03
24	8.74	32.400	6.61	25.15	20	8.73	32.40	25.15	283	0.06
48	8.71	32.404	6.57	25.15	30	8.74	32.40	25.15	283	0.08
72	8.36	32.976	5.15	25.65	50	8.69	32.43	25.18	281	0.14
96	7.68	33.334	4.51	26.03	75	8.29	33.03	25.71	230	0.21
120	7.76	33.596	3.85	26.23	100	7.64	33.38	26.08	196	0.26
144	7.70	33.741	3.37	26.35	125	7.76	33.64	26.26	179	0.31
168	7.59	33.834	3.04	26.44	150	7.68	33.77	26.38	168	0.35
192	7.38	33.916	2.55	26.53	175	7.54	33.86	26.47	160	0.39
216	7.23	33.945	2.40	26.58	200	7.32	33.93	26.55	152	0.43
239	6.88	33.958	2.34	26.64	250	6.73	33.96	26.66	142	0.51
288	6.30	33.984	2.07	26.73	300	6.18	33.99	26.75	134	0.58
343	5.82	34.015	1.57	26.82	400	5.44	34.05	26.89	121	0.70
428	5.30	34.072	1.18	26.93	500	4.96	34.12	27.01	111	0.82
518	4.89	34.138	1.06	27.03	600	4.56	34.19	27.11	103	0.93
706	4.18	34.252	0.82	27.19	700	4.20	34.25	27.19	95	1.03
900	3.75	34.353	0.43	27.32	800	3.93	34.30	27.26	89	1.12
1096	3.32	34.420	0.60	27.41	1000	3.53	34.39	27.37	79	1.29
1390	2.71	34.494	0.95	27.53	1200	3.10	34.45	27.46	72	1.45
5	CNAV OSHAWA; January 21, 1959; 0321 GCT; 48°44'N, 129°37'W; sounding, 1470 fm; wind, 140°, 20 kt; weather, intermittent slight rain; sea, slight.									
0	7.40	32.416	6.52	25.35	0	7.40	32.42	25.35	263	0.00
9	7.75	32.432	6.61	25.32	10	7.77	32.43	25.32	267	0.03
22	7.76	32.446	6.54	25.33	20	7.80	32.44	25.32	266	0.05
42	7.76	32.455	6.59	25.33	30	7.76	32.45	25.33	266	0.08
62	7.76	32.466	6.54	25.34	50	7.76	32.46	25.34	265	0.13
83	7.54	32.845	5.29	25.67	75	7.65	32.66	25.51	250	0.20
104	6.98	33.275	4.61	26.09	100	7.11	33.19	26.00	203	0.26
124	6.72	33.500	4.46	26.30	125	6.71	33.51	26.30	174	0.30
145	6.62	33.572	4.46	26.37	150	6.61	33.60	26.39	167	0.35
165	6.63	33.700	4.01	26.47	175	6.66	33.77	26.52	155	0.39
186	6.72	33.852	3.17	26.57	200	6.66	33.89	26.62	146	0.42
207	6.59	33.897	2.77	26.63	250	6.18	33.93	26.71	138	0.50
249	6.19	33.934	2.59	26.71	300	5.75	33.98	26.80	130	0.56
390	5.07	34.040	1.55	26.93	400	5.01	34.05	26.94	116	0.69
488	4.58	34.130	0.77	27.05	500	4.53	34.14	27.07	105	0.80
586	4.21	34.208	0.45	27.16	600	4.17	34.22	27.17	96	0.90
782	3.84	34.306	0.57	27.27	700	3.93	34.27	27.24	90	1.00
978	3.38	34.362	0.39	27.36	800	3.80	34.31	27.28	87	1.08
1468	2.54	34.481	0.65	27.53	1000	3.33	34.37	27.37	79	1.25
					1200	2.94	34.42	27.45	72	1.40

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; January 21, 1959; 1240 GCT; 48°50'N, 131°20'W; sounding, 1600 fm; wind, 270°, 5 kt; weather, intermittent slight rain; sea, slight.										6
0	8.60	32.494	6.79	25.24	0	8.60	32.49	25.24	274	0.00
10	(8.45)a)	32.499	6.54	(25.27)	10	8.45	32.50	25.27	271	0.23
25	8.31	32.500	6.65	25.29	20	8.35	32.50	25.28	270	0.06
50	8.28	32.502	6.64	25.30	30	8.28	32.50	25.29	269	0.08
75	(8.30)a)	32.498	6.61	(25.29)	50	8.28	32.50	25.30	269	0.14
100	8.38	32.505	6.64	25.28	75	8.30	32.50	25.29	270	0.20
125	8.28	32.515	6.70	25.31	100	8.38	32.50	25.28	271	0.27
150	7.36	33.095	5.90	25.89	125	8.28	32.52	25.31	270	0.34
175	6.84	33.394	4.98	26.20	150	7.36	33.09	25.89	214	0.40
200	6.71	33.613	5.12	26.39	175	6.84	33.39	26.20	185	0.45
225	6.56	33.729	4.70	26.50	200	6.71	33.61	26.39	168	0.50
250	6.35	33.821	4.51	26.60	250	6.35	33.82	26.60	148	0.58
300	5.85	33.895	3.17	26.72	300	5.85	33.89	26.72	137	0.65
395	4.88	33.983	1.96	26.91	400	4.84	33.99	26.91	119	0.78
494	4.44	34.083	1.03	27.03	500	4.42	34.09	27.04	108	0.89
592	4.17	34.165	0.65	27.13	600	4.15	34.17	27.13	99	1.00
789	3.70	34.305	0.52	27.29	700	3.90	34.25	27.22	92	1.09
986	3.26	34.396	0.37	27.40	800	3.67	34.31	27.29	85	1.18
1183	2.82	34.445	0.59	27.48	1000	3.23	34.40	27.41	75	1.34
1475	2.44	34.460	0.94	27.53	1200	2.79	34.45	27.49	68	1.49
1500	(2.42)b)	(34.458)b)	-	(27.53)	1500	2.42	34.46	27.53	65	1.69
CNAV OSHAWA; January 22, 1959; 0038 GCT; 48°56'N, 133°20'W; sounding, 1800 fm; wind, 260°, 12 kt; weather, cloudy; sea, missing.										7
0	9.20	32.561	6.54	25.20	0	9.20	32.56	25.20	278	0.00
10	9.18	32.550	6.55	25.20	10	9.18	32.55	25.20	278	0.03
25	9.14	32.549	6.55	25.20	20	9.15	32.55	25.20	278	0.06
50	9.16	32.566	6.48	25.21	30	9.14	32.55	25.20	278	0.08
75	8.86	32.603	6.48	25.29	50	9.16	32.57	25.21	277	0.14
100	7.54	32.954	5.89	25.76	75	8.86	32.60	25.29	271	0.21
125	6.88	33.308	5.50	26.13	100	7.54	32.95	25.76	226	0.27
150	6.66	33.492	5.41	26.30	125	6.88	33.31	26.13	191	0.32
175	6.50	33.687	5.13	26.47	150	6.66	33.49	26.30	175	0.37
200	6.32	33.783	4.78	26.57	175	6.50	33.69	26.47	159	0.41
225	6.14	33.842	4.32	26.64	200	6.32	33.78	26.57	150	0.45
250	5.86	33.874	3.81	26.70	250	5.86	33.87	26.70	138	0.52
300	5.36	33.917	2.89	26.80	300	5.36	33.92	26.80	129	0.59
390	4.66	33.961	2.24	26.91	400	4.61	33.97	26.92	118	0.72
488	4.33	34.046	1.09	27.02	500	4.29	34.06	27.03	109	0.83
585	3.99	34.145	0.65	27.13	600	3.94	34.16	27.15	98	0.93
780	3.50	34.279	0.94	27.28	700	3.67	34.23	27.23	90	1.03
976	3.22	34.371	0.39	27.38	800	3.46	34.29	27.30	84	1.12
1171	2.83	34.440	0.45	27.48	1000	3.18	34.38	27.40	76	1.28
1464	2.46	34.488	1.04	27.55	1200	2.78	34.45	27.49	68	1.43
1500	(2.43)b)	(34.489)b)	-	(27.55)	1500	2.43	34.49	27.55	63	1.62

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

	OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
8	CNAV OSHAWA; January 22, 1959; 0922 GCT; 49°01'N, 135°00'W; sounding, 2100 fm; wind, 140°, 6 kt; weather, light fog; sea, missing.										
	0	8.40	32.542	6.68	25.31	0	8.40	32.54	25.31	267	0.00
	10	8.03	32.538	6.66	25.36	10	8.03	32.54	25.36	262	0.03
	25	8.04	32.540	6.64	25.36	20	7.96	32.54	25.37	262	0.05
	50	(8.05)a)	32.544	6.64	(25.36)	30	8.04	32.54	25.36	263	0.08
	75	8.05	32.565	6.69	25.38	50	8.05	32.54	25.36	263	0.13
	100	7.75	32.694	6.48	25.52	75	8.05	32.56	25.38	262	0.20
	125	6.47	33.206	5.80	26.10	100	7.75	32.69	25.52	248	0.26
	150	6.12	33.517	5.59	26.39	125	6.47	33.21	26.10	194	0.32
	175	5.67	33.670	5.21	26.57	150	6.12	33.52	26.39	167	0.36
	200	5.42	33.741	4.85	26.65	175	5.67	33.67	26.57	150	0.40
	225	5.30	33.800	-	26.71	200	5.42	33.74	26.65	142	0.44
	250	5.02	33.826	3.90	26.76	250	5.02	33.83	26.76	132	0.51
	300	4.65	33.882	2.93	26.85	300	4.65	33.88	26.85	124	0.57
	395	4.29	33.989	1.99	26.97	400	4.28	33.99	26.98	112	0.69
	494	4.12	34.088	0.99	27.07	500	4.11	34.09	27.08	104	0.80
	593	3.88	34.151	0.96	27.15	600	3.86	34.16	27.15	97	0.90
	790	3.45	34.278	0.84	27.29	700	3.64	34.22	27.22	91	1.00
	988	3.16	34.373	0.53	27.39	800	3.43	34.28	27.30	85	1.09
	1185	2.81	34.442	0.55	27.48	1000	3.14	34.38	27.40	76	1.25
	1482	2.36	34.510	1.33	27.57	1200	2.79	34.45	27.48	68	1.40
	1500	(2.34)b)	(34.513)b)	-	(27.58)	1500	2.34	34.51	27.58	60	1.59
9	CNAV OSHAWA; January 22, 1959; 2114 GCT; 49°40'N, 132°40'W; sounding, 1690 fm; wind, 130°, 15 kt; weather, intermittent slight rain; sea, slight.										
	0	8.00	32.296	6.72	25.18	0	8.00	32.30	25.18	280	0.00
	10	7.38	32.430	6.72	25.37	10	7.38	32.43	25.37	262	0.03
	24	7.36	32.452	6.84	25.39	20	7.26	32.47	25.41	258	0.05
	48	7.34	32.459	6.70	25.40	30	7.35	32.46	25.39	260	0.08
	72	7.27	32.472	6.68	25.42	50	7.34	32.46	25.40	260	0.13
	96	7.31	32.534	6.37	25.46	75	7.27	32.48	25.42	258	0.20
	121	6.63	33.394	4.39	26.23	100	7.25	32.62	25.53	247	0.26
	145	6.40	33.730	3.51	26.52	125	6.56	33.48	26.31	174	0.31
	168	6.25	33.819	3.18	26.61	150	6.36	33.77	26.56	151	0.35
	192	5.88	33.862	2.98	26.69	175	6.16	33.84	26.64	144	0.39
	216	5.60	33.884	2.71	26.74	200	5.78	33.87	26.71	136	0.43
	240	5.46	33.914	2.56	26.78	250	5.38	33.92	26.80	129	0.49
	288	4.98	33.943	2.17	26.86	300	4.89	33.95	26.88	121	0.56
	377	4.58	34.009	1.43	26.96	400	4.50	34.03	26.98	112	0.67
	473	4.32	34.102	0.87	27.06	500	4.23	34.12	27.09	103	0.78
	571	3.97	34.163	1.04	27.15	600	3.89	34.18	27.17	96	0.88
	767	3.59	34.289	0.38	27.28	700	3.67	34.25	27.24	89	0.98
	964	3.10	34.370	0.55	27.40	800	3.52	34.31	27.30	84	1.06
	1160	2.81	34.433	0.52	27.47	1000	3.03	34.38	27.41	74	1.22
	1200	(2.78)b)	(34.444)b)	-	(27.48)	1200	2.78	34.44	27.48	68	1.37

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

10

CNAV OSHAWA; January 23, 1959; 0559 GCT; 50°13'N, 131°07'W; sounding, 1600 fm; wind, 200°, 20 kt; weather, drizzle; sea, slight.

0	8.00	32.430	6.59	25.28	0	8.00	32.43	25.28	270	0.00
9	(7.94)a)	32.423	6.57	(25.28)	10	7.93	32.42	25.28	270	0.03
23	7.88	32.424	6.64	25.29	20	7.89	32.42	25.29	269	0.05
46	7.88	32.437	6.59	25.30	30	7.87	32.43	25.30	269	0.08
69	7.89	32.440	6.63	25.30	50	7.88	32.44	25.30	268	0.14
92	7.88	32.490	6.44	25.34	75	7.89	32.45	25.31	268	0.20
114	7.16	32.234	4.63	25.24	100	7.70	32.43	25.32	267	0.27
137	7.06	33.532	3.96	26.28	125	7.03	32.66	25.59	242	0.33
159	6.92	33.606	3.85	26.35	150	6.98	33.71	26.43	163	0.38
182	6.60	33.753	3.52	26.51	175	6.72	33.70	26.46	161	0.43
204	6.44	33.833	3.38	26.60	200	6.46	33.82	26.59	149	0.46
228	6.16	33.900	2.89	26.69	250	5.89	33.93	26.74	134	0.54
274	5.59	33.928	2.63	26.78	300	5.38	33.95	26.82	127	0.60
349	5.20	34.006	1.75	26.89	400	4.92	34.05	26.95	116	0.72
435	4.72	34.067	1.19	26.99	500	4.43	34.11	27.06	106	0.84
521	4.35	34.126	0.94	27.08	600	4.07	34.18	27.14	98	0.94
708	3.79	34.234	0.76	27.22	700	3.81	34.23	27.22	92	1.04
902	3.37	34.333	0.41	27.34	800	3.57	34.28	27.28	86	1.13
1100	2.92	34.424	0.84	27.45	1000	3.15	34.38	27.40	76	1.29

11

CNAV OSHAWA; January 23, 1959; 1240 GCT; 50°40'N, 129°48'W; sounding, 1100 fm; wind, 200°, 15 kt; weather, partly cloudy; sea, slight.

0	8.60	32.280	6.60	25.07	0	8.60	32.28	25.07	290	0.00
10	8.48	32.270	6.57	25.08	10	8.48	32.27	25.08	289	0.03
24	8.46	32.360	6.56	25.16	20	8.45	32.32	25.13	285	0.06
49	8.46	32.372	6.52	25.17	30	8.46	32.38	25.17	281	0.09
73	8.89	33.338	4.12	25.86	50	8.47	32.39	25.18	280	0.14
97	8.24	33.595	3.40	26.16	75	8.88	33.39	25.90	213	0.20
122	7.90	(33.761)a)	2.90	(26.34)	100	8.18	33.62	26.19	186	0.26
146	7.77	33.824	2.60	26.41	125	7.87	33.77	26.35	170	0.30
170	7.54	33.848	2.72	26.46	150	7.74	33.83	26.42	165	0.34
195	7.38	33.890	2.51	26.51	175	7.50	33.86	26.47	160	0.38
219	6.98	33.912	2.67	26.59	200	7.32	33.90	26.53	155	0.42
243	6.78	33.966	2.25	26.66	250	6.71	33.98	26.67	141	0.50
292	6.11	33.970	2.49	26.75	300	6.02	33.97	26.76	133	0.57
386	5.44	34.010	1.81	26.86	400	5.35	34.02	26.88	123	0.70
483	4.85	34.073	1.10	26.98	500	4.78	34.09	27.00	112	0.81
580	4.58	34.151	0.69	27.07	600	4.52	34.17	27.09	104	0.92
773	3.97	34.270	0.77	27.23	700	4.21	34.23	27.17	97	1.02
964	3.53	34.368	0.87	27.35	800	3.90	34.29	27.25	90	1.12
1159	3.04	34.432	0.39	27.45	1000	3.44	34.38	27.37	79	1.29
1200	(2.93)b)	(34.441)b)	-	(27.47)	1200	2.93	34.44	27.47	70	1.44

12

CNAV OSHAWA; January 23, 1959; 1607 GCT; 50°50'N, 129°33'W; sounding, 188 fm; wind, 220°, 10 kt; weather, cloudy; sea, slight.

0	8.50	32.304	6.57	25.11	0	8.50	32.30	25.11	286	0.00
10	(8.49)a)	32.303	6.46	(25.11)	10	8.49	32.30	25.11	287	0.03
23	8.49	32.303	6.53	25.11	20	8.49	32.30	25.11	287	0.06
46	8.50	32.324	6.48	25.12	30	8.49	32.31	25.11	287	0.09
69	8.51	32.320	6.52	25.12	50	8.50	32.33	25.12	286	0.14
91	8.39	33.351	4.07	25.94	75	8.49	32.50	25.26	273	0.21
114	8.28	33.542	3.40	26.11	100	8.35	33.53	26.09	194	0.27
137	8.08	33.610	3.23	26.19	125	8.20	33.59	26.16	188	0.32
159	8.06	33.612	3.25	26.20	150	8.05	33.62	26.20	185	0.37
182	8.05	33.702	2.78	26.27	175	8.05	33.67	26.24	182	0.41
204	8.04	33.746	2.70	26.30	200	8.04	33.74	26.30	176	0.46
227	7.92	33.775	2.64	26.35	250	7.69	33.82	26.42	166	0.55
273	7.34	33.884	2.78	26.51	300	7.08	33.92	26.58	151	0.63
300	(7.08)b)	(33.920)b)	-	(26.58)						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
13	CNAV OSHAWA; January 23, 1959; 2214 GCT; 51°21'N, 130°27'W; sounding, missing; wind, 200°, 15 kt; weather, smoke; sea, slight.									
0	8.50	32.415	6.50	25.19	0	8.50	32.42	25.19	278	0.00
10	8.34	32.394	6.62	25.20	10	8.34	32.39	25.20	278	0.03
24	7.84	32.398	6.72	25.28	20	8.02	32.39	25.25	273	0.06
48	7.83	32.416	6.62	25.29	30	7.74	32.40	25.30	269	0.08
72	7.28	33.050	5.19	25.87	50	7.80	32.45	25.32	267	0.14
96	7.00	33.306	4.82	26.11	75	7.23	33.10	25.92	211	0.20
120	7.05	33.562	4.03	26.30	100	6.99	33.35	26.14	189	0.25
144	7.32	33.770	3.25	26.43	125	7.09	33.61	26.33	172	0.29
167	7.14	33.915	2.40	26.57	150	7.31	33.81	26.46	160	0.34
190	6.96	33.954	2.20	26.62	175	7.08	33.94	26.60	148	0.37
214	6.88	33.957	2.15	26.64	200	6.91	33.96	26.63	144	0.41
238	6.72	33.975	2.26	26.67	250	6.61	33.98	26.69	140	0.48
286	6.12	33.962	2.52	26.74	300	5.97	33.96	26.76	133	0.55
380	5.40	34.035	1.67	26.89	400	5.27	34.06	26.92	119	0.68
400	(5.27)a)	(34.055)a)	-	(26.92)						
14	CNAV OSHAWA; January 24, 1959; 0320 GCT; 52°00'N, 131°18'W; sounding, missing; wind, 160°, 30 kt; weather, cloudy, precipitation within sight; sea, moderate.									
0	8.20	32.215	6.61	25.08	0	8.20	32.22	25.08	289	0.00
10	8.08	32.209	6.53	25.10	10	8.08	32.21	25.10	288	0.03
24	8.10	32.211	6.59	25.09	20	8.07	32.21	25.10	288	0.06
48	8.12	32.226	6.63	25.10	30	8.11	32.21	25.10	288	0.09
71	8.06	32.352	6.52	25.21	50	8.12	32.23	25.11	287	0.14
94	8.17	32.471	6.25	25.29	75	8.07	32.37	25.23	276	0.22
117	8.29	32.880	5.06	25.59	100	8.20	32.55	25.34	265	0.28
140	8.08	33.082	4.73	25.78	125	8.25	32.97	25.67	235	0.35
163	7.58	33.348	4.21	26.06	150	7.90	33.19	25.89	214	0.40
186	7.54	33.596	3.56	26.26	175	7.50	33.48	26.17	188	0.45
209	7.42	33.680	3.38	26.34	200	7.48	33.67	26.32	174	0.50
232	7.16	33.755	3.21	26.44	250	7.03	33.79	26.49	159	0.58
278	6.96	33.820	2.98	26.52	300	6.88	33.86	26.56	153	0.66
300	(6.88)a)	(33.855)a)	-	(26.56)						
15	CNAV OSHAWA; January 24, 1959; 0617 GCT; 52°00'N, 131°42'W; sounding, 1400 fm; wind, 210°, 15 kt; weather, cloudy, precipitation within sight; sea, moderate.									
0	7.70	32.420	6.65	25.32	0	7.70	32.42	25.32	267	0.00
10	7.68	32.402	6.74	25.30	10	7.68	32.40	25.30	268	0.03
24	7.68	32.404	6.80	25.31	20	7.68	32.40	25.30	268	0.05
48	7.66	32.404	6.71	25.31	30	7.68	32.40	25.31	268	0.08
72	7.53	32.392	6.75	25.32	50	7.65	32.40	25.31	268	0.14
96	7.50	32.981	5.32	25.78	75	7.52	32.43	25.35	264	0.20
120	7.06	33.356	4.30	26.14	100	7.46	33.06	25.85	217	0.26
144	6.80	33.491	4.32	26.28	125	6.99	33.40	26.19	186	0.31
168	6.71	33.638	4.00	26.41	150	6.76	33.53	26.31	174	0.36
192	7.02	33.824	3.01	26.51	175	6.76	33.69	26.44	162	0.40
216	6.79	33.871	2.71	26.58	200	7.00	33.86	26.54	153	0.44
240	6.66	33.925	2.64	26.64	250	6.59	33.94	26.66	142	0.52
287	6.26	33.954	2.22	26.72	300	6.15	33.96	26.73	136	0.58
370	5.56	33.986	2.04	26.83	400	5.30	33.98	26.86	125	0.72
463	4.76	33.957	1.92	26.90	500	4.55	33.98	26.94	117	0.84
555	4.34	34.058	1.08	27.02	600	4.18	34.10	27.07	105	0.95
740	3.88	34.184	0.56	27.17	700	3.94	34.17	27.15	98	1.05
924	3.52	34.307	0.73	27.31	800	3.75	34.22	27.22	93	1.15
1109	3.14	34.397	0.41	27.41	1000	3.37	34.35	27.35	81	1.33

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

16

CNAV OSHAWA; January 24, 1959; 1636 GCT; 51°58'N, 134°04'W; sounding, 1600 fm; wind, 220°, 10 kt; weather, partly cloudy; sea, slight.

0	7.60	32.441	6.78	25.35	0	7.60	32.44	25.35	264	0.00
10	(7.32)a)	32.438	6.68	(25.38)	10	7.32	32.44	25.38	260	0.03
25	7.06	32.434	6.74	25.41	20	7.12	32.44	25.41	258	0.05
50	7.08	32.441	6.69	25.42	30	7.02	32.43	25.42	257	0.08
75	7.00	32.454	6.74	25.44	50	7.08	32.44	25.42	258	0.13
100	7.07	32.672	5.97	25.60	75	7.00	32.45	25.44	256	0.20
125	6.68	33.196	4.86	26.06	100	7.07	32.67	25.60	241	0.26
150	5.98	33.427	4.76	26.34	125	6.68	33.20	26.06	197	0.31
175	5.54	33.603	4.60	26.53	150	5.98	33.43	26.34	172	0.36
200	5.40	33.746	4.05	26.66	175	5.54	33.60	26.53	154	0.40
225	5.35	33.826	3.44	26.73	200	5.40	33.75	26.66	141	0.44
250	5.18	33.882	3.00	26.79	250	5.18	33.88	26.79	129	0.50
300	4.86	33.928	2.15	26.86	300	4.86	33.93	26.86	123	0.57
380	4.44	33.987	1.66	26.96	400	4.38	34.00	26.98	113	0.69
478	4.34	34.082	1.08	27.04	500	4.30	34.10	27.06	105	0.80
576	4.08	34.177	0.97	27.15	600	4.02	34.20	27.17	96	0.90
772	3.65	34.294	0.50	27.28	700	3.79	34.26	27.24	90	0.99
967	3.14	34.384	0.41	27.40	800	3.58	34.31	27.30	84	1.08
1162	2.81	34.426	0.87	27.47	1000	3.07	34.39	27.42	74	1.24
1455	2.41	34.500	0.88	27.56	1200	2.75	34.43	27.48	69	1.39
1500	(2.36)b)	(34.513)b)	-	(27.57)	1500	2.36	34.51	27.57	60	1.58

17

CNAV OSHAWA; January 25, 1959; 0153 GCT; 52°02'N, 136°00'W; sounding, 1950 fm; wind, 180°, 20 kt; weather, partly cloudy; sea, slight.

0	7.00	32.531	6.97	25.50	0	7.00	32.53	25.50	249	0.00
9	6.86	32.495	6.87	25.49	10	6.85	32.49	25.49	250	0.02
23	6.87	32.496	6.94	25.49	20	6.84	32.49	25.49	251	0.05
45	(6.89)a)	32.493	7.03	(25.48)	30	6.88	32.50	25.49	251	0.08
67	6.91	32.496	6.91	25.48	50	6.89	32.49	25.48	251	0.13
89	6.87	32.500	6.84	25.49	75	6.90	32.50	25.49	252	0.19
111	6.88	32.571	6.54	25.55	100	6.87	32.53	25.51	249	0.25
132	6.54	33.131	5.49	26.03	125	6.69	32.89	25.82	220	0.31
155	6.20	33.556	4.27	26.41	150	6.27	33.48	26.34	171	0.36
176	6.24	33.707	3.61	26.52	175	6.23	33.70	26.52	154	0.40
199	6.25	33.821	3.04	26.61	200	6.24	33.82	26.62	146	0.44
220	5.74	33.836	3.58	26.69	250	5.29	33.88	26.78	131	0.51
264	5.20	33.908	2.88	26.81	300	4.87	33.95	26.88	121	0.57
354	4.58	33.978	1.92	26.93	400	4.36	34.01	26.99	112	0.69
443	4.21	34.050	1.25	27.03	500	4.10	34.10	27.08	103	0.80
535	4.09	34.139	0.65	27.11	600	3.99	34.19	27.17	96	0.90
718	3.77	34.260	0.55	27.24	700	3.81	34.25	27.23	90	0.99
901	3.25	34.338	0.59	27.36	800	3.56	34.30	27.30	85	1.08
1082	2.92	34.408	0.82	27.44	1000	3.05	34.38	27.41	75	1.24
1350	2.50	34.480	1.03	27.54	1200	2.72	34.44	27.49	68	1.39

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
18	CNAV OSHAWA; January 25, 1959; 1111 GCT; 52°00'N, 137°59'W; sounding, 1950 fm; wind, 180°, 15 kt; weather, cloudy; sea, slight.									
0	6.70	32.653	6.94	25.63	0	6.70	32.65	25.63	236	0.00
10	6.58	32.648	6.96	25.65	10	6.58	32.65	25.65	235	0.02
24	6.58	32.656	6.98	25.65	20	6.56	32.65	25.65	235	0.05
48	6.58	32.674	6.98	25.67	30	6.58	32.66	25.66	235	0.07
71	6.56	32.700	6.98	25.69	50	6.58	32.68	25.67	234	0.12
95	6.54	32.704	6.97	25.69	75	6.56	32.70	25.69	232	0.18
118	6.51	32.780	6.83	25.76	100	6.53	32.71	25.70	231	0.24
142	6.10	33.380	5.51	26.28	125	6.43	32.90	25.86	216	0.29
165	5.28	33.610	5.01	26.56	150	5.86	33.50	26.41	165	0.34
188	4.91	33.710	4.58	26.69	175	5.06	33.67	26.64	143	0.38
212	4.71	33.787	3.86	26.77	200	4.79	33.75	26.73	134	0.41
235	4.40	33.798	3.77	26.81	250	4.25	33.81	26.84	124	0.48
282	4.05	33.859	2.77	26.90	300	3.98	33.88	26.92	116	0.54
366	4.06	33.979	1.77	26.99	400	4.04	34.02	27.02	108	0.65
458	3.96	34.070	1.15	27.07	500	3.90	34.10	27.11	101	0.76
550	3.83	34.138	1.13	27.14	600	3.76	34.18	27.18	95	0.86
739	3.56	34.283	0.53	27.28	700	3.62	34.25	27.25	88	0.95
932	3.12	34.357	0.55	27.38	800	3.44	34.31	27.32	82	1.04
1124	2.78	34.413	0.72	27.46	1000	2.99	34.38	27.41	74	1.19
1414	2.42	34.490	1.02	27.55	1200	2.67	34.43	27.49	68	1.34
19	CNAV OSHAWA; January 25, 1959; 2050 GCT; 52°00'N, 140°01'W; sounding, 1900 fm; wind, 180°, 15 kt; weather, overcast; sea, moderate.									
0	6.80	32.708	6.92	25.66	0	6.80	32.71	25.66	234	0.00
10	6.58	32.660	6.92	25.66	10	6.58	32.66	25.66	234	0.02
23	6.58	32.659	6.94	25.65	20	6.55	32.65	25.65	235	0.05
44	6.59	32.657	6.94	25.65	30	6.58	32.66	25.65	235	0.07
68	6.58	32.659	6.94	25.65	50	6.59	32.66	25.65	235	0.12
90	6.62	32.694	6.79	25.68	75	6.59	32.67	25.66	235	0.18
112	6.92	33.533	3.60	26.30	100	6.72	32.98	25.88	214	0.23
134	6.94	33.698	2.98	26.42	125	6.97	33.71	26.43	162	0.28
155	6.80	33.788	2.73	26.51	150	6.85	33.77	26.49	157	0.32
178	6.58	33.838	2.70	26.58	175	6.61	33.83	26.57	150	0.36
200	6.36	33.860	2.71	26.63	200	6.36	33.86	26.63	145	0.40
222	6.16	33.899	2.54	26.68	250	5.89	33.92	26.74	135	0.47
266	5.73	33.926	2.43	26.76	300	5.39	33.94	26.81	128	0.53
370	4.67	33.928	2.09	26.89	400	4.56	33.95	26.92	118	0.66
465	4.60	34.040	1.11	26.98	500	4.50	34.07	27.02	110	0.77
560	4.24	34.120	0.50	27.08	600	4.10	34.15	27.12	100	0.88
750	3.62	34.247	0.50	27.25	700	3.77	34.22	27.21	93	0.98
936	3.12	34.336	0.56	27.37	800	3.48	34.27	27.28	86	1.07
1119	2.84	34.414	0.52	27.45	1000	3.00	34.36	27.40	75	1.23
1389	2.48	34.473	0.64	27.53	1200	2.73	34.44	27.48	68	1.38

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

20

CNAV OSHAWA; January 26, 1959; 0547 GCT; 53°00'N, 141°28'W; sounding, 1900 fm; wind, 180°, 25 kt; weather, cloudy; sea, slight.

0	5.70	32.618	7.15	25.73	0	5.70	32.62	25.73	227	0.00
10	5.38	32.602	7.09	25.76	10	5.38	32.60	25.76	225	0.02
24	5.39	32.597	7.11	25.75	20	5.33	32.60	25.76	225	0.04
48	5.41	32.596	7.15	25.75	30	5.39	32.60	25.75	226	0.07
72	5.40	32.604	7.12	25.76	50	5.41	32.60	25.75	226	0.11
97	5.43	32.672	6.87	25.81	75	5.40	32.61	25.76	225	0.17
121	5.16	33.437	4.96	26.44	100	5.41	32.73	25.85	216	0.23
145	4.92	33.640	4.31	26.63	125	5.12	33.51	26.50	155	0.27
169	4.77	33.742	3.48	26.73	150	4.88	33.67	26.66	141	0.31
193	4.18	33.758	3.86	26.80	175	4.66	33.75	26.75	132	0.34
217	4.02	33.788	3.38	26.84	200	4.09	33.77	26.82	126	0.38
241	3.86	33.811	2.93	26.88	250	3.82	33.82	26.89	119	0.44
290	3.78	33.884	2.18	26.94	300	3.78	33.90	26.96	113	0.50
334	3.83	33.959	1.66	27.00	400	3.85	34.06	27.08	103	0.61
414	3.84	34.081	1.10	27.09	500	3.72	34.14	27.15	96	0.71
498	3.72	34.140	0.88	27.15	600	3.57	34.21	27.22	90	0.80
669	3.46	34.255	0.81	27.27	700	3.41	34.27	27.29	85	0.89
846	3.13	34.335	0.66	27.36	800	3.22	34.32	27.34	80	0.97
1035	2.82	34.398	0.72	27.44	1000	2.87	34.39	27.43	72	1.13
1328	2.48	34.473	0.64	27.53	1200	2.61	34.44	27.50	66	1.27

21

CNAV OSHAWA; January 26, 1959; 1525 GCT; 54°00'N, 143°00'W; sounding, 1900 fm; wind, 180°, 25 kt; weather, overcast; sea, slight.

0	5.90	32.546	7.08	25.65	0	5.90	32.55	25.65	235	0.00
10	(5.72)a)	32.588	7.03	(25.70)	10	5.72	32.59	25.70	230	0.02
24	5.58	32.593	7.06	25.73	20	5.61	32.60	25.73	228	0.05
48	5.62	32.593	7.10	25.72	30	5.56	32.59	25.73	228	0.07
71	5.67	32.634	7.09	25.75	50	5.62	32.59	25.72	228	0.12
95	5.68	32.632	7.08	25.74	75	5.67	32.64	25.75	226	0.17
119	5.40	33.182	5.35	26.21	100	5.65	32.70	25.80	221	0.23
143	5.20	33.544	4.39	26.52	125	5.34	33.29	26.30	174	0.28
167	4.84	33.662	4.05	26.66	150	5.11	33.60	26.58	148	0.32
190	4.41	33.768	3.46	26.79	175	4.70	33.70	26.70	137	0.36
213	4.21	33.827	2.78	26.85	200	4.29	33.80	26.82	125	0.39
237	4.08	33.836	2.89	26.88	250	4.04	33.85	26.89	119	0.45
285	4.02	33.908	1.95	26.94	300	4.01	33.93	26.96	113	0.51
357	4.03	34.006	1.20	27.02	400	4.02	34.05	27.05	105	0.62
449	4.00	34.098	0.78	27.09	500	3.92	34.14	27.13	99	0.72
542	3.82	34.162	0.60	27.16	600	3.70	34.20	27.20	92	0.82
732	3.40	34.282	0.54	27.30	700	3.48	34.26	27.27	86	0.91
920	3.07	34.374	0.49	27.40	800	3.27	34.32	27.34	80	0.99
1110	2.75	34.424	0.48	27.47	1000	2.93	34.40	27.43	72	1.15
1392	2.40	34.496	0.73	27.56	1200	2.62	34.45	27.50	66	1.29

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
22	CNAV OSHAWA; January 27, 1959; 0001 GCT; 54°00'N, 141°00'W; sounding, 2050 fm; wind, 200°, 35 kt; weather, overcast; sea, moderate.									
0	6.20	32.453	7.07	25.54	0	6.20	32.45	25.54	245	0.00
10	5.54	32.440	7.07	25.61	10	5.54	32.44	25.61	239	0.02
23	5.57	32.439	7.13	25.61	20	5.47	32.44	25.62	238	0.05
46	5.56	32.464	7.07	25.63	30	5.58	32.44	25.61	239	0.07
70	5.54	32.478	7.09	25.64	50	5.56	32.47	25.63	237	0.12
94	5.51	32.500	7.03	25.66	75	5.53	32.48	25.64	236	0.18
118	6.30	32.937	5.22	25.91	100	5.63	32.57	25.70	231	0.24
142	6.50	33.236	4.20	26.12	125	6.42	33.04	25.97	206	0.29
165	6.28	33.441	3.85	26.31	150	6.47	33.32	26.19	186	0.34
188	6.16	33.644	3.37	26.48	175	6.22	33.53	26.39	167	0.39
212	5.96	33.765	2.97	26.60	200	6.07	33.72	26.55	152	0.43
236	5.80	33.832	2.79	26.68	250	5.66	33.86	26.72	137	0.50
282	5.23	33.890	2.27	26.79	300	5.05	33.91	26.83	126	0.57
366	4.58	33.978	1.40	26.93	400	4.38	34.00	26.98	113	0.69
457	4.14	34.033	1.16	27.03	500	4.03	34.07	27.07	105	0.80
549	3.98	34.122	0.67	27.11	600	3.88	34.16	27.15	97	0.90
732	3.61	34.230	0.80	27.24	700	3.68	34.22	27.22	92	0.99
914	3.27	34.326	1.27	27.34	800	3.48	34.27	27.28	86	1.08
1098	2.92	34.401	0.81	27.44	1000	3.11	34.36	27.39	77	1.25
23	CNAV OSHAWA; January 27, 1959; 0808 GCT; 53°59'N, 139°00'W; sounding, 1700 fm; wind, 220°, 30 kt; weather, cloudy; sea, moderate.									
0	6.00	32.666	7.03	25.73	0	6.00	32.67	25.73	227	0.00
10	5.99	32.647	7.02	25.72	10	5.99	32.65	25.72	228	0.02
25	5.82	32.660	7.07	25.75	20	5.90	32.65	25.73	227	0.05
49	5.83	32.659	7.09	25.75	30	5.79	32.66	25.75	225	0.07
74	5.84	32.676	7.07	25.76	50	5.83	32.66	25.75	226	0.11
98	5.90	33.145	5.75	26.12	75	5.84	32.69	25.77	224	0.17
123	5.56	33.528	4.86	26.47	100	5.89	33.18	26.15	188	0.22
148	5.69	33.736	3.74	26.61	125	5.55	33.55	26.49	157	0.27
172	5.53	33.809	3.18	26.69	150	5.69	33.75	26.62	144	0.30
197	5.36	33.892	2.67	26.78	175	5.51	33.82	26.70	137	0.34
222	5.16	33.915	2.32	26.82	200	5.34	33.90	26.78	129	0.37
247	4.94	33.930	2.04	26.86	250	4.92	33.93	26.86	122	0.44
296	4.60	33.979	1.61	26.93	300	4.57	33.98	26.94	116	0.50
352	4.12	33.982	1.25	26.99	400	3.95	34.02	27.04	107	0.61
440	3.97	34.082	0.81	27.08	500	3.88	34.14	27.14	98	0.71
530	3.84	34.166	0.69	27.16	600	3.73	34.22	27.21	92	0.81
708	3.54	34.266	0.44	27.27	700	3.55	34.26	27.27	87	0.90
886	3.11	34.347	0.48	27.38	800	3.33	34.31	27.33	82	0.98
1063	2.84	34.399	0.49	27.44	1000	2.92	34.38	27.42	73	1.14

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

24

CNAV OSHAWA; January 27, 1959; 1543 GCT; 54°01'N, 137°00'W; sounding, 1700 fm; wind, 240°, 40 kt; weather, overcast, precipitation within sight; sea, moderate.

0	6.60	32.532	7.02	25.55	0	6.60	32.53	25.55	244	0.00
10	6.11	32.539	6.93	25.62	10	6.11	32.54	25.62	238	0.02
23	6.12	32.535	7.03	25.61	20	6.05	32.54	25.63	237	0.05
47	6.14	32.536	6.99	25.61	30	6.13	32.53	25.61	239	0.07
70	6.10	32.538	7.01	25.62	50	6.14	32.54	25.61	239	0.12
84	6.08	32.564	6.93	25.64	75	6.09	32.55	25.63	238	0.18
105	6.20	32.640	6.69	25.69	100	6.16	32.62	25.68	234	0.24
126	6.52	33.138	4.98	26.04	125	6.50	33.10	26.02	202	0.29
145	6.39	33.295	4.68	26.18	150	6.35	33.33	26.21	183	0.34
166	6.21	33.442	4.37	26.32	175	6.12	33.50	26.38	168	0.39
187	6.00	33.579	4.05	26.45	200	5.88	33.65	26.52	155	0.43
208	5.81	33.680	3.72	26.56	250	5.20	33.89	26.80	129	0.50
250	5.20	33.892	2.04	26.80	300	4.66	34.05	26.98	111	0.56
392	4.21	34.086	0.86	27.06	400	4.18	34.09	27.07	104	0.67
491	3.96	34.148	0.82	27.14	500	3.94	34.15	27.14	98	0.77
590	3.80	34.159	0.54	27.16	600	3.78	34.16	27.16	96	0.87
787	3.43	34.302	0.58	27.31	700	3.60	34.22	27.23	91	0.96
985	3.06	34.385	0.84	27.41	800	3.41	34.31	27.32	82	1.05
1182	2.67	34.450	0.62	27.50	1000	3.03	34.39	27.42	74	1.21
1200	(2.63)a)	(34.455)a)	-	(27.50)	1200	2.63	34.46	27.50	66	1.35

25

CNAV OSHAWA; January 28, 1959; 0010 GCT; 53°59'N, 135°00'W; sounding, 1500 fm; wind, 280°, 30 kt; weather, cloudy; sea, slight.

0	6.60	32.508	6.93	25.53	0	6.60	32.51	25.53	246	0.00
10	6.52	32.510	6.83	25.54	10	6.52	32.51	25.54	245	0.02
23	6.53	32.508	6.92	25.54	20	6.52	32.51	25.54	245	0.05
47	6.54	32.513	6.93	25.54	30	6.53	32.51	25.54	246	0.07
70	6.53	32.518	6.93	25.55	50	6.54	32.51	25.55	245	0.12
94	6.64	32.591	6.72	25.59	75	6.54	32.53	25.56	245	0.18
116	6.82	33.304	4.45	26.13	100	6.68	32.72	25.69	232	0.24
140	6.62	33.570	3.86	26.37	125	6.79	33.47	26.26	178	0.30
163	6.42	33.732	3.40	26.52	150	6.53	33.65	26.44	162	0.34
185	6.22	33.832	3.09	26.62	175	6.31	33.79	26.58	149	0.38
209	6.07	33.864	2.92	26.67	200	6.12	33.86	26.66	142	0.42
232	5.92	33.891	2.71	26.71	250	5.78	33.91	26.74	134	0.48
278	5.51	33.928	2.36	26.79	300	5.35	33.95	26.82	127	0.55
346	5.09	33.985	2.00	26.88	400	4.83	34.03	26.94	116	0.67
432	4.70	34.047	1.18	26.98	500	4.42	34.09	27.04	107	0.79
519	4.34	34.108	0.81	27.06	600	4.07	34.16	27.13	99	0.89
700	3.82	34.216	1.13	27.20	700	3.82	34.22	27.20	93	0.99
887	3.39	34.328	0.69	27.33	800	3.58	34.28	27.28	87	1.08
1077	2.93	34.409	0.50	27.44	1000	3.12	34.38	27.40	76	1.24

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
26	CNAV OSHAWA; January 28, 1959; 0447 GCT; 54°12'N, 134°08'W; sounding, 1250 fm; wind, 240°, 15 kt; weather, cloudy; sea, slight.									
0	7.30	32.364	6.81	25.33	0	7.30	32.36	25.33	266	0.00
10	7.21	32.369	6.76	25.34	10	7.21	32.37	25.34	264	0.03
24	7.22	32.369	6.81	25.34	20	7.20	32.37	25.34	264	0.05
48	7.26	32.375	6.81	25.34	30	7.23	32.37	25.34	265	0.08
72	7.23	32.570	6.38	25.50	50	7.26	32.38	25.35	264	0.13
95	7.22	32.891	5.43	25.75	75	7.23	32.60	25.53	248	0.20
119	6.89	33.248	4.63	26.08	100	7.18	32.96	25.81	221	0.26
143	6.78	33.405	4.21	26.21	125	6.84	33.31	26.13	191	0.31
167	6.64	33.579	3.60	26.37	150	6.74	33.45	26.26	179	0.36
190	6.62	33.724	3.27	26.49	175	6.62	33.63	26.41	165	0.40
214	6.56	33.763	3.20	26.53	200	6.60	33.75	26.51	156	0.44
238	6.07	33.852	2.71	26.66	250	5.87	33.89	26.71	137	0.51
286	5.48	33.964	-	26.82	300	5.35	33.98	26.85	124	0.58
382	5.02	33.997	1.59	26.90	400	4.94	34.01	26.92	119	0.70
478	4.61	34.070	1.46	27.00	500	4.53	34.09	27.03	109	0.82
574	4.29	34.144	1.09	27.10	600	4.21	34.16	27.12	101	0.92
765	3.81	34.247	0.49	27.23	700	3.95	34.22	27.19	94	1.02
956	3.33	34.343	0.49	27.35	800	3.72	34.27	27.25	89	1.11
1147	2.94	34.404	0.49	27.44	1000	3.23	34.36	27.38	78	1.28
27	CNAV OSHAWA; January 28, 1959; 0850 GCT; 54°15'N, 133°20'W; sounding, 236 fm; wind, 220°, 10 kt; weather, cloudy; sea, slight.									
0	7.30	32.339	6.71	25.31	0	7.30	32.34	25.31	267	0.00
10	(7.42)a)	32.326	6.72	(25.28)	10	7.42	32.33	25.28	270	0.03
24	7.54	32.325	6.76	25.26	20	7.51	32.32	25.27	272	0.05
47	7.58	32.327	6.72	25.26	30	7.57	32.33	25.26	272	0.08
71	7.58	32.337	6.71	25.27	50	7.58	32.33	25.26	273	0.14
94	7.59	32.373	6.54	25.29	75	7.58	32.34	25.27	272	0.20
117	7.58	32.470	6.33	25.37	100	7.59	32.39	25.31	269	0.27
140	7.11	32.476	6.61	25.44	125	7.47	32.48	25.40	261	0.34
164	7.17	32.639	6.10	25.56	150	7.07	32.52	25.48	253	0.40
186	6.64	33.228	3.74	26.09	175	6.97	32.88	25.78	225	0.46
211	6.80	33.417	3.80	26.22	200	6.63	33.40	26.23	183	0.52
234	6.68	33.594	3.70	26.38	250	6.61	33.68	26.46	162	0.60
303	6.48	33.770	3.18	26.54	300	6.48	33.77	26.54	154	0.68
28	CNAV OSHAWA; January 31, 1959; 0144 GCT; 54°32'N, 133°00'W; sounding, 195 fm; wind, 130°, 20 kt; weather, intermittent slight rain; sea, slight.									
0	6.80	31.476	6.96	24.70	0	6.80	31.48	24.70	326	0.00
10	6.29	31.474	6.85	24.76	10	6.29	31.47	24.76	320	0.03
25	6.30	31.423	6.85	24.72	20	6.19	31.45	24.75	321	0.06
50	6.34	31.512	6.76	24.78	30	6.31	31.42	24.72	324	0.10
75	6.32	31.523	6.76	24.79	50	6.34	31.51	24.78	318	0.16
100	6.36	31.562	6.66	24.82	75	6.32	31.52	24.79	317	0.24
125	6.43	31.650	6.56	24.88	100	6.36	31.56	24.82	315	0.32
150	6.50	31.814	6.27	25.00	125	6.43	31.65	24.88	309	0.40
175	6.69	32.024	6.17	25.14	150	6.50	31.81	25.00	298	0.48
200	6.82	33.008	4.28	25.90	175	6.69	32.02	25.14	285	0.55
225	6.66	33.296	3.70	26.14	200	6.82	33.01	25.90	214	0.61
275	6.52	33.503	3.34	26.33	250	6.56	33.46	26.29	178	0.71
325	6.24	33.704	2.95	26.52	300	6.40	33.60	26.42	166	0.80

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; January 31, 1959; 0642 GCT; 54°53'N, 134°01'W; sounding, 80 fm; wind, 130°, 4 kt; weather, partly cloudy; sea, missing.										29
0	6.90	31.873	6.82	24.99	0	6.90	31.87	24.99	297	0.00
10	6.47	31.850	6.72	25.03	10	6.47	31.85	25.03	294	0.03
25	6.51	31.871	6.76	25.04	20	6.41	31.86	25.05	293	0.06
50	6.62	31.971	6.72	25.11	30	6.53	31.88	25.05	292	0.09
75	7.04	32.193	6.72	25.23	50	6.62	31.97	25.11	287	0.15
100	7.05	32.206	6.66	25.24	75	7.04	32.19	25.23	276	0.22
125	7.29	32.390	6.37	25.35	100	7.05	32.21	25.24	275	0.29
					125	7.29	32.39	25.35	265	0.36
CNAV OSHAWA; January 31, 1959; 0858 GCT; 55°00'N, 134°20'W; sounding, 115 fm; wind, 130°, 10 kt; weather, cloudy; sea, missing.										30
0	6.40	31.788	6.81	24.99	0	6.40	31.79	24.99	297	0.00
10	6.44	31.785	6.69	24.98	10	6.44	31.78	24.98	298	0.03
25	6.50	31.911	6.71	25.08	20	6.48	31.85	25.03	294	0.06
50	7.08	32.169	6.57	25.20	30	6.57	31.96	25.10	287	0.09
75	7.36	32.322	6.48	25.29	50	7.08	32.17	25.20	278	0.15
100	7.39	32.368	6.46	25.32	75	7.36	32.32	25.29	270	0.22
125	7.38	32.457	6.10	25.39	100	7.39	32.37	25.32	268	0.28
150	7.34	32.636	5.59	25.53	125	7.38	32.46	25.39	261	0.35
175	7.21	32.838	5.03	25.71	150	7.34	32.64	25.53	248	0.41
200	6.76	33.410	3.75	26.22	175	7.21	32.84	25.71	232	0.47
					200	6.76	33.41	26.22	183	0.53
CNAV OSHAWA; January 31, 1959; 1409 GCT; 55°32'N, 135°40'W; sounding, 1450 fm; wind, 150°, 30 kt; weather, overcast, precipitation within sight; sea, slight.										31
0	6.90	32.477	6.82	25.47	0	6.90	32.48	25.47	252	0.00
10	6.68	32.468	6.85	25.49	10	6.68	32.47	25.49	250	0.02
24	6.62	32.479	6.82	25.51	20	6.61	32.47	25.50	249	0.05
49	6.34	32.543	6.89	25.59	30	6.57	32.49	25.52	247	0.08
74	6.08	32.558	6.89	25.64	50	6.33	32.54	25.60	240	0.12
98	6.50	33.077	5.23	25.99	75	6.08	32.57	25.65	236	0.18
123	5.95	33.434	4.82	26.34	100	6.49	33.11	26.02	201	0.24
148	5.52	33.580	4.67	26.51	125	5.91	33.45	26.36	168	0.29
173	5.40	33.688	4.30	26.61	150	5.50	33.59	26.52	154	0.33
198	5.38	33.774	3.67	26.68	175	5.39	33.70	26.62	145	0.36
223	5.46	33.843	3.11	26.73	200	5.38	33.78	26.69	139	0.40
248	5.16	33.884	2.73	26.79	250	5.14	33.89	26.80	128	0.47
298	4.77	33.934	2.20	26.88	300	4.76	33.94	26.88	121	0.53
352	4.63	33.959	1.71	26.91	400	4.51	34.00	26.96	114	0.65
441	4.40	34.044	1.14	27.01	500	4.30	34.11	27.07	105	0.76
526	4.27	34.144	1.22	27.10	600	4.08	34.20	27.16	96	0.86
702	3.72	34.236	0.58	27.23	700	3.73	34.24	27.23	91	0.96
882	3.33	34.314	0.45	27.33	800	3.49	34.28	27.29	85	1.00
1068	2.99	34.388	0.44	27.42	1000	3.11	34.36	27.39	76	1.16
1350	2.61	34.457	0.63	27.51	1200	2.79	34.43	27.47	69	1.31
CNAV OSHAWA; January 31, 1959; 2124 GCT; 55°58'N, 137°00'W; sounding, 1280 fm; wind, 150°, 50 kt; weather, overcast; sea, moderate.										32
0	5.90	32.538	7.09	25.64	0	5.90	32.54	25.64	235	0.00
8	5.66	32.552	7.09	25.68	10	5.63	32.55	25.69	231	0.02
22	5.68	32.550	7.11	25.68	20	5.64	32.55	25.69	232	0.05
42	5.69	32.557	7.10	25.68	30	5.69	32.55	25.68	232	0.07
60	5.68	32.554	7.08	25.68	50	5.69	32.56	25.68	232	0.12
78	5.66	32.554	7.07	25.69	75	5.66	32.55	25.69	232	0.18
95	5.68	32.551	7.09	25.68	100	5.69	32.55	25.68	233	0.23
110	5.72	32.552	7.09	25.68	125	5.79	32.66	25.75	227	0.29
123	5.78	32.614	6.98	25.72	150	5.70	33.33	26.29	176	0.34
137	5.86	33.096	5.44	26.09						
151	5.68	33.334	4.95	26.30						
158	5.70	33.551	4.58	26.47						
165	5.23	33.757	3.54	26.69						

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
33	CNAV OSHAWA; February 1, 1959; 0430 GCT; 56°35'N, 138°40'W; sounding, missing; wind, 160°, 45 kt; weather, overcast; sea, rough.									
0	6.00	32.547	6.99	25.64	0	6.00	32.55	25.64	236	0.00
10	5.76	32.542	6.98	25.66	10	5.76	32.54	25.66	234	0.02
25	5.76	32.541	7.00	25.66	20	5.71	32.54	25.67	233	0.05
49	5.76	32.542	7.00	25.66	30	5.76	32.54	25.66	234	0.07
73	5.56	32.580	6.97	25.72	50	5.76	32.54	25.67	234	0.12
98	6.58	33.228	4.70	26.10	75	5.60	32.61	25.74	227	0.18
123	6.51	33.592	3.64	26.40	100	6.61	33.27	26.13	191	0.23
147	6.24	33.672	3.73	26.50	125	6.50	33.61	26.41	164	0.27
172	5.80	33.770	3.60	26.63	150	6.20	33.68	26.51	155	0.31
196	5.62	33.847	3.14	26.71	175	5.76	33.78	26.64	143	0.35
221	5.51	33.882	2.84	26.75	200	5.60	33.86	26.72	136	0.39
245	5.36	33.840	2.40	26.74	250	5.33	33.84	26.74	134	0.45
294	5.00	33.939	2.15	26.86	300	4.96	33.95	26.87	122	0.52
388	4.55	34.011	1.39	26.96	400	4.50	34.02	26.98	113	0.64
486	4.24	34.096	1.52	27.06	500	4.20	34.11	27.08	104	0.75
582	3.94	34.165	0.62	27.15	600	3.89	34.18	27.17	96	0.85
775	3.49	34.276	0.44	27.28	700	3.64	34.24	27.24	90	0.94
971	3.14	34.356	0.44	27.38	800	3.44	34.29	27.30	84	1.03
1168	2.84	34.414	0.43	27.45	1000	3.09	34.37	27.39	76	1.19
1200	(2.80)a)	(34.421)a)	-	(27.46)	1200	2.80	34.42	27.46	70	1.34
34	CNAV OSHAWA; February 1, 1959; 1108 GCT; 56°59'N, 139°56'W; sounding, 1880 fm; wind, 260°, 10 kt; weather, intermittent slight rain; sea, slight.									
0	5.20	32.404	7.15	25.62	0	5.20	32.40	25.62	238	0.00
10	5.04	32.566	7.17	25.77	10	5.04	32.57	25.77	224	0.02
24	5.06	32.569	7.17	25.77	20	5.03	32.59	25.79	222	0.05
49	5.08	32.570	7.19	25.77	30	5.07	32.57	25.77	224	0.07
73	5.06	32.574	7.15	25.77	50	5.08	32.57	25.77	224	0.11
97	5.91	33.265	4.82	26.22	75	5.10	32.61	25.79	222	0.17
121	5.92	33.572	4.04	26.46	100	5.96	33.32	26.26	178	0.22
146	5.79	33.701	3.73	26.57	125	5.91	33.61	26.49	157	0.26
170	5.46	33.785	3.37	26.68	150	5.75	33.72	26.59	147	0.30
194	5.40	33.852	2.87	26.74	175	5.43	33.80	26.70	137	0.34
218	5.19	33.880	2.60	26.79	200	5.36	33.86	26.75	132	0.37
242	5.09	33.888	2.52	26.81	250	5.04	33.89	26.82	127	0.44
291	4.68	33.938	1.80	26.89	300	4.62	33.95	26.91	119	0.50
368	4.24	33.993	1.16	26.98	400	4.13	34.02	27.02	109	0.61
460	4.02	34.070	0.76	27.07	500	3.93	34.10	27.10	102	0.72
553	3.82	34.136	0.57	27.14	600	3.73	34.17	27.17	95	0.82
740	3.49	34.258	0.56	27.27	700	3.55	34.23	27.24	89	0.91
930	3.18	34.341	0.45	27.36	800	3.39	34.29	27.30	84	1.00
1120	2.84	34.398	-	27.44	1000	3.06	34.37	27.40	76	1.16
1410	2.42	34.484	0.74	27.55	1200	2.71	34.42	27.47	69	1.31

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; February 1, 1959; 1924 GCT; 56°41'N, 141°40'W; sounding, 1950 fm; wind, 250°, 15 kt; weather, partly cloudy, lightning visible; sea, slight.										35
0	5.00	32.580	7.04	25.78	0	5.00	32.58	25.78	222	0.00
10	5.03	32.574	7.09	25.77	10	5.03	32.57	25.77	223	0.02
25	5.03	32.573	7.10	25.77	20	5.04	32.57	25.77	223	0.04
49	5.10	32.581	7.12	25.77	30	5.04	32.57	25.77	223	0.07
74	5.09	32.585	7.09	25.78	50	5.10	32.58	25.77	224	0.11
98	5.64	33.148	5.28	26.16	75	5.10	32.60	25.78	223	0.17
123	5.38	33.578	4.24	26.53	100	5.65	33.19	26.19	185	0.22
147	5.18	33.707	3.82	26.65	125	5.36	33.60	26.55	151	0.26
172	5.10	33.796	3.23	26.73	150	5.16	33.72	26.66	140	0.30
196	5.02	33.840	2.89	26.78	175	5.09	33.80	26.74	133	0.33
221	4.90	33.883	2.33	26.82	200	5.00	33.85	26.78	129	0.37
245	4.90	33.914	1.90	26.85	250	4.88	33.92	26.85	123	0.43
294	4.47	33.953	0.95	26.93	300	4.43	33.96	26.93	116	0.49
400	4.16	34.039	0.84	27.03	400	4.16	34.04	27.03	108	0.60
500	3.90	34.124	0.67	27.12	500	3.90	34.12	27.12	99	0.71
600	3.71	34.191	0.54	27.19	600	3.71	34.19	27.19	93	0.80
800	3.38	34.293	0.48	27.31	700	3.54	34.25	27.26	88	0.90
1000	3.06	34.368	0.47	27.40	800	3.38	34.29	27.31	84	0.98
1200	2.72	34.425	0.55	27.47	1000	3.06	34.37	27.40	76	1.14
1500	2.36	34.495	0.83	27.56	1200	2.72	34.42	27.47	69	1.29
					1500	2.36	34.50	27.56	61	1.49
CNAV OSHAWA; February 2, 1959; 0342 GCT; 56°22'N, 143°23'W; sounding, 2020 fm; wind, 200°, 30 kt; weather, overcast; sea, moderate.										36
0	4.90	32.568	7.16	25.78	0	4.90	32.57	25.78	222	0.00
10	4.91	32.542	7.13	25.76	10	4.91	32.54	25.76	224	0.02
24	4.91	32.542	7.13	25.76	20	4.91	32.54	25.76	225	0.04
48	4.93	32.543	7.17	25.76	30	4.91	32.54	25.76	224	0.07
72	4.93	32.555	7.12	25.77	50	4.93	32.54	25.76	225	0.11
96	5.53	33.003	5.66	26.06	75	4.97	32.59	25.79	222	0.17
120	5.64	33.441	4.30	26.39	100	5.58	33.08	26.11	192	0.22
144	5.36	33.581	4.04	26.53	125	5.61	33.49	26.43	162	0.27
168	5.04	33.687	3.79	26.65	150	5.28	33.61	26.56	150	0.30
192	4.69	33.783	3.24	26.77	175	4.94	33.72	26.69	138	0.34
216	4.55	33.825	2.90	26.82	200	4.62	33.80	26.79	128	0.38
240	4.52	33.855	2.56	26.84	250	4.50	33.87	26.86	122	0.44
288	4.39	33.960	1.49	26.94	300	4.36	33.98	26.96	113	0.50
356	4.20	34.016	1.18	27.01	400	4.10	34.05	27.05	106	0.61
449	4.00	34.098	0.72	27.09	500	3.92	34.13	27.13	99	0.71
542	3.86	34.158	0.62	27.15	600	3.75	34.20	27.19	93	0.81
730	3.46	34.285	0.47	27.29	700	3.53	34.26	27.27	86	0.90
922	3.14	34.357	0.45	27.38	800	3.33	34.32	27.33	81	0.98
1115	2.82	34.402	0.48	27.45	1000	3.01	34.38	27.41	74	1.14
1410	2.42	34.487	0.69	27.55	1200	2.69	34.42	27.48	69	1.29

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
37	CNAV OSHAWA; February 2, 1959; 1732 GCT; 57°15'N, 144°22'W; sounding, 2050 fm; wind, 220°, 30 kt; weather, overcast; sea, moderate.									
0	5.30	32.462	7.11	25.65	0	5.30	32.46	25.65	234	0.00
8	4.99	32.464	7.10	25.69	10	4.95	32.46	25.70	230	0.02
22	5.02	32.468	7.07	25.69	20	4.97	32.47	25.70	231	0.05
42	5.02	32.480	7.06	25.70	30	5.03	32.47	25.69	231	0.07
61	5.00	32.484	7.07	25.71	50	5.01	32.48	25.70	230	0.12
82	5.06	32.488	7.01	25.70	75	5.03	32.49	25.70	230	0.17
102	5.96	32.859	5.52	25.89	100	5.83	32.81	25.86	216	0.23
122	6.17	33.216	4.57	26.15	125	6.20	33.26	26.18	186	0.28
141	6.32	33.456	3.74	26.32	150	6.29	33.55	26.39	166	0.32
162	6.16	33.646	3.23	26.49	175	6.08	33.73	26.56	151	0.36
183	6.04	33.759	2.95	26.59	200	5.85	33.79	26.64	143	0.40
202	5.82	33.793	3.00	26.64	250	5.02	33.85	26.79	130	0.47
242	5.12	33.844	2.81	26.77	300	4.66	33.91	26.88	121	0.53
322	4.65	33.941	1.71	26.90	400	4.34	34.01	26.99	112	0.65
401	4.34	34.013	1.10	26.99	500	4.10	34.09	27.07	104	0.76
482	4.14	34.074	0.80	27.06	600	3.88	34.16	27.15	98	0.86
648	3.79	34.187	0.53	27.18	700	3.67	34.21	27.22	92	0.96
820	3.38	34.260	0.48	27.28	800	3.43	34.25	27.27	87	1.05
990	3.14	34.349	0.50	27.37	1000	3.12	34.36	27.38	77	1.22
1000	(3.12)a)	(34.358)a)	-	(27.38)						
38	CNAV OSHAWA; February 3, 1959; 0042 GCT; 58°22'N, 143°39'W; sounding, 2050 fm; wind, 270°, 15 kt; weather, overcast; sea, moderate.									
0	5.00	32.612	7.09	25.81	0	5.00	32.61	25.81	220	0.00
10	4.90	32.598	7.07	25.81	10	4.90	32.60	25.81	220	0.02
24	4.91	32.600	7.07	25.81	20	4.89	32.60	25.81	220	0.04
48	4.94	32.598	7.06	25.80	30	4.92	32.60	25.81	220	0.07
72	4.94	32.608	7.04	25.81	50	4.94	32.60	25.80	221	0.11
96	5.11	32.846	6.41	25.98	75	4.95	32.63	25.82	219	0.17
120	5.08	33.412	4.40	26.43	100	5.12	32.92	26.04	199	0.22
144	5.02	33.623	3.67	26.60	125	5.07	33.49	26.49	156	0.26
168	4.79	33.710	3.32	26.70	150	4.98	33.66	26.64	143	0.30
192	(4.62)b)	33.816	2.69	(26.80)	175	4.73	33.74	26.73	134	0.34
216	4.52	33.877	2.02	26.86	200	4.58	33.84	26.83	125	0.37
240	4.50	33.905	1.94	26.89	250	4.47	33.92	26.90	119	0.43
288	4.20	33.977	1.24	26.97	300	4.16	33.99	26.99	110	0.49
358	4.19	34.061	0.90	27.04	400	4.13	34.10	27.08	103	0.60
448	4.02	34.126	0.68	27.11	500	3.90	34.16	27.15	97	0.70
540	3.79	34.178	0.54	27.18	600	3.65	34.21	27.22	91	0.79
729	3.37	34.278	0.47	27.30	700	3.43	34.26	27.28	86	0.88
918	3.08	34.362	0.46	27.39	800	3.25	34.31	27.34	81	0.96
1110	2.74	34.420	0.53	27.47	1000	2.94	34.39	27.43	73	1.12

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; February 3, 1959; 0705 GCT; 59°10'N, 143°11'W; sounding, 1950 fm; wind, 270°, 8 kt; weather, partly cloudy; sea, calm.										39
0	5.20	32.555	7.03	25.74	0	5.20	32.56	25.74	226	0.00
10	4.99	32.550	6.98	25.76	10	4.99	32.55	25.76	224	0.02
24	5.00	32.550	7.04	25.76	20	4.96	32.55	25.76	224	0.04
49	5.00	32.557	7.08	25.76	30	5.00	32.55	25.76	225	0.07
73	5.00	32.561	7.01	25.77	50	5.00	32.56	25.76	224	0.11
98	5.01	32.568	7.01	25.77	75	5.00	32.56	25.77	224	0.17
122	6.21	33.416	4.33	26.30	100	5.07	32.61	25.80	222	0.23
146	6.09	33.607	3.94	26.46	125	6.27	33.48	26.34	171	0.28
171	5.84	33.813	3.52	26.66	150	6.06	33.64	26.49	157	0.32
195	5.70	33.823	3.15	26.68	175	5.81	33.83	26.67	140	0.35
219	5.50	33.858	2.87	26.73	200	5.66	33.83	26.69	138	0.39
243	5.24	33.880	2.16	26.78	250	5.17	33.89	26.80	129	0.46
292	4.75	33.916	1.89	26.87	300	4.70	33.92	26.88	121	0.52
373	4.54	33.974	1.47	26.94	400	4.46	33.99	26.96	114	0.64
466	4.22	34.046	1.00	27.03	500	4.13	34.07	27.06	106	0.75
560	4.00	34.108	0.73	27.10	600	3.91	34.13	27.13	100	0.85
749	3.62	34.238	0.49	27.24	700	3.71	34.20	27.20	93	0.95
937	3.26	34.329	0.47	27.35	800	3.52	34.27	27.27	87	1.04
1128	2.95	34.396	0.46	27.43	1000	3.15	34.35	27.38	78	1.21
CNAV OSHAWA; February 3, 1959; 1017 GCT; 59°30'N, 143°04'W; sounding, 360 fm; wind, 310°, 15 kt; weather, partly cloudy; sea, slight.										40
0	5.90	32.473	6.89	25.59	0	5.90	32.47	25.59	240	0.00
10	5.96	32.452	6.81	25.57	10	5.96	32.45	25.57	243	0.02
24	5.96	32.452	6.89	25.57	20	5.97	32.45	25.57	243	0.05
49	6.08	32.496	6.72	25.59	30	5.97	32.46	25.57	243	0.07
74	6.14	32.562	6.47	25.63	50	6.08	32.50	25.59	241	0.12
98	6.37	32.690	5.90	25.71	75	6.15	32.57	25.64	237	0.18
123	6.19	32.777	5.79	25.80	100	6.37	32.70	25.71	230	0.24
148	6.42	33.126	4.82	26.04	125	6.19	32.80	25.81	221	0.30
173	6.38	33.449	3.68	26.30	150	6.43	33.15	26.06	198	0.35
197	6.32	33.604	3.28	26.43	175	6.38	33.47	26.32	174	0.40
222	6.22	33.690	3.05	26.51	200	6.31	33.62	26.44	162	0.44
247	6.08	33.730	2.93	26.56	250	6.06	33.73	26.57	151	0.52
297	5.86	33.810	2.71	26.65	300	5.85	33.81	26.66	143	0.59
396	5.26	33.902	2.33	26.80	400	5.24	33.91	26.80	130	0.73
495	4.66	33.971	1.58	26.92	500	4.63	33.98	26.93	118	0.86
594	4.02	34.126	0.73	27.11	600	3.98	34.14	27.13	100	0.96
600	(3.98)a)	(34.138)a)	-	(27.13)						
CNAV OSHAWA; February 3, 1959; 1709 GCT; 59°20'N, 144°42'W; sounding, 1450 fm; wind, 270°, 15 kt; weather, clear; sea, slight.										41
0	6.00	32.574	6.85	25.66	0	6.00	32.57	25.66	234	0.00
10	5.27	32.560	7.02	25.74	10	5.27	32.56	25.74	227	0.02
25	5.29	32.558	7.00	25.73	20	5.13	32.56	25.75	226	0.05
50	5.22	32.561	7.01	25.74	30	5.29	32.56	25.73	227	0.07
75	5.14	32.564	7.02	25.75	50	5.22	32.56	25.74	226	0.11
100	5.26	32.604	6.82	25.77	75	5.14	32.56	25.75	226	0.17
125	6.65	33.247	4.61	26.11	100	5.26	32.60	25.77	224	0.23
150	6.58	33.509	3.49	26.32	125	6.65	33.25	26.11	193	0.28
175	6.35	33.656	3.29	26.47	150	6.58	33.51	26.32	173	0.33
200	5.77	33.741	3.56	26.61	175	6.35	33.66	26.47	159	0.37
225	5.72	33.826	3.10	26.68	200	5.77	33.74	26.61	146	0.41
250	5.51	33.854	3.09	26.73	250	5.51	33.85	26.73	135	0.48
300	5.05	33.892	2.56	26.81	300	5.05	33.89	26.81	128	0.54
385	4.58	33.952	1.72	26.91	400	4.51	33.96	26.93	117	0.67
483	4.25	34.018	1.11	27.00	500	4.21	34.03	27.02	110	0.78
581	4.05	34.115	0.77	27.10	600	4.01	34.13	27.12	101	0.89
777	3.68	34.219	0.49	27.22	700	3.82	34.19	27.18	95	0.99
973	3.24	34.331	0.53	27.35	800	3.63	34.23	27.23	91	1.08
1168	2.81	34.415	0.54	27.46	1000	3.18	34.34	27.37	79	1.25
1200	(2.74)a)	(34.426)a)	-	(27.47)	1200	2.74	34.43	27.47	69	1.40

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
42	CNAV OSHAWA; February 3, 1959; 2251 GCT; 59°10'N, 146°13'W; sounding, 600 fm; wind, 270°, 5 kt; weather, partly cloudy; sea, missing.									
0	5.60	32.165	6.98	25.39						
10	5.60	32.136	6.96	25.36						
25	5.60	32.138	6.93	25.36						
50	5.61	32.161	6.96	25.38						
75	5.64	32.174	6.96	25.39						
100	5.84	32.230	6.76	25.41						
125	6.20	32.362	6.50	25.47						
150	6.21	32.470	6.44	25.55						
175	6.04	32.575	6.37	25.66						
398	5.15	33.900	2.26	26.81						
498	4.41	34.013	1.18	26.98						
597	4.14	34.083	0.81	27.06						
796	3.63	34.238	0.45	27.24						
995	3.10	34.356	0.45	27.38						
1000	(3.09)a)	(34.358)a)	-	(27.39)						
43	CNAV OSHAWA; February 4, 1959; 0501 GCT; 59°00'N, 148°00'W; sounding, 85 fm; wind, 090°, 10 kt; weather, overcast; sea, missing.									
0	6.00	32.018	7.02	25.22	0	6.00	32.02	25.22	276	0.00
10	5.39	31.998	7.01	25.28	10	5.39	32.00	25.28	270	0.03
25	5.39	31.998	7.02	25.28	20	5.27	31.99	25.29	269	0.06
50	5.73	32.160	6.88	25.37	30	5.42	32.01	25.29	270	0.08
75	5.78	32.287	6.83	25.46	50	5.73	32.16	25.37	262	0.14
100	6.10	32.495	6.01	25.59	75	5.78	32.29	25.46	254	0.20
130	5.86	32.572	6.41	25.68	100	6.10	32.50	25.59	242	0.26
145	5.84	32.590	6.33	25.69	125	5.95	32.57	25.67	235	0.32
150	(5.85)a)	(32.593)a)	-	(25.69)	150	5.85	32.59	25.69	232	0.38
44	CNAV OSHAWA; February 4, 1959; 0710 GCT; 58°45'N, 148°00'W; sounding, 400 fm; wind, 090°, 10 kt; weather, overcast; sea, slight.									
0	5.90	32.497	6.99	25.61	0	5.90	32.50	25.61	238	0.00
10	5.38	32.488	6.99	25.67	10	5.38	32.49	25.67	233	0.02
25	5.44	32.529	6.96	25.69	20	5.31	32.51	25.69	231	0.05
50	5.36	32.556	6.90	25.72	30	5.44	32.54	25.70	230	0.07
75	5.23	32.576	6.92	25.75	50	5.36	32.56	25.72	228	0.12
100	5.16	32.593	6.90	25.77	75	5.23	32.58	25.75	226	0.17
125	6.23	32.978	5.10	25.95	100	5.16	32.59	25.77	224	0.23
150	6.49	33.404	3.72	26.25	125	6.23	32.98	25.95	208	0.28
175	6.13	33.622	3.25	26.47	150	6.49	33.40	26.25	180	0.33
200	6.02	33.661	3.18	26.51	175	6.13	33.62	26.47	159	0.38
225	5.96	33.717	3.11	26.57	200	6.02	33.66	26.51	155	0.42
250	5.82	33.804	2.90	26.65	250	5.82	33.80	26.65	143	0.49
300	5.44	33.868	2.61	26.75	300	5.44	33.87	26.75	134	0.56
394	4.58	33.957	1.62	26.92	400	4.54	33.96	26.93	118	0.69
492	4.21	34.064	0.94	27.04	500	4.18	34.07	27.05	106	0.80
585	3.94	34.141	0.69	27.13	600	3.90	34.15	27.14	98	0.90
786	3.41	34.256	0.54	27.28	700	3.63	34.22	27.22	91	1.00
800	(3.38)a)	(34.261)a)	-	(27.28)	800	3.38	34.26	27.28	86	1.09

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; February 4, 1959; 1353 GCT; 57°50'N, 148°00'W; sounding, 1450 fm; wind, 200°, 15 kt; weather, drizzle; sea, slight.										45
0	5.00	32.697	7.13	25.87	0	5.00	32.70	25.87	214	0.00
10	4.89	32.591	7.10	25.80	10	4.89	32.59	25.80	220	0.02
25	4.90	32.596	7.15	25.81	20	4.87	32.57	25.79	222	0.04
50	4.89	32.604	7.17	25.81	30	4.90	32.60	25.81	220	0.07
74	4.88	32.598	7.15	25.81	50	4.89	32.60	25.81	220	0.11
98	5.43	33.100	5.49	26.14	75	4.89	32.61	25.82	220	0.17
123	5.49	33.434	4.38	26.40	100	5.45	33.13	26.17	187	0.22
148	4.92	33.618	3.70	26.61	125	5.47	33.45	26.42	163	0.26
173	(4.74)a)	33.705	3.21	(26.70)	150	4.89	33.63	26.62	144	0.30
197	4.92	33.849	2.62	26.79	175	4.74	33.71	26.71	136	0.34
222	4.92	33.889	2.24	26.83	200	4.93	33.86	26.80	128	0.37
246	4.44	33.879	2.06	26.87	250	4.38	33.88	26.88	121	0.43
296	4.24	33.950	1.36	26.95	300	4.23	33.96	26.95	114	0.49
396	4.06	34.066	0.90	27.06	400	4.05	34.07	27.06	104	0.60
494	3.92	34.141	0.63	27.13	500	3.91	34.14	27.14	98	0.70
593	3.67	34.192	0.52	27.20	600	3.66	34.20	27.20	92	0.80
790	3.39	34.290	0.48	27.30	700	3.48	34.25	27.26	87	0.89
987	3.03	34.370	0.46	27.40	800	3.37	34.29	27.31	83	0.98
1185	2.70	34.433	0.59	27.48	1000	3.01	34.37	27.41	75	1.14
1200	(2.68)b)	(34.437)b)	-	(27.49)	1200	2.68	34.44	27.49	68	1.28
CNAV OSHAWA; February 4, 1959; 2220 GCT; 56°40'N, 148°01'W; sounding, 2200 fm; wind, 230°, 20 kt; weather, cloudy; sea, slight.										46
0	4.60	32.716	7.24	25.93	0	4.60	32.72	25.93	208	0.00
10	4.82	32.693	7.18	25.89	10	4.82	32.69	25.89	212	0.02
23	4.83	32.692	7.26	25.89	20	4.86	32.69	25.88	213	0.04
47	4.81	32.693	7.16	25.89	30	4.83	32.69	25.89	212	0.06
69	4.64	32.804	6.98	26.00	50	4.80	32.70	25.90	211	0.11
93	4.77	32.909	6.50	26.07	75	4.64	32.83	26.02	200	0.16
116	4.55	33.394	4.73	26.48	100	4.74	33.02	26.16	188	0.21
139	3.96	33.655	3.11	26.74	125	4.36	33.52	26.60	146	0.25
162	3.87	33.756	2.44	26.83	150	3.85	33.72	26.81	126	0.28
185	4.02	33.844	1.77	26.89	175	3.93	33.81	26.87	121	0.32
208	3.95	33.896	1.36	26.94	200	4.00	33.88	26.92	116	0.34
231	3.97	33.943	0.99	26.97	250	3.96	33.98	27.00	109	0.40
278	3.92	34.012	0.59	27.03	300	3.89	34.04	27.06	104	0.46
381	3.79	34.118	0.52	27.13	400	3.76	34.13	27.14	96	0.56
480	3.65	34.181	0.52	27.19	500	3.61	34.20	27.21	91	0.65
578	3.38	34.254	0.50	27.28	600	3.34	34.27	27.29	83	0.74
776	3.19	34.344	0.49	27.37	700	3.21	34.32	27.34	79	0.82
974	2.78	34.424	0.52	27.47	800	3.15	34.35	27.38	76	0.90
1172	2.56	34.457	0.65	27.51	1000	2.74	34.43	27.48	68	1.04
1200	(2.54)b)	(34.458)b)	-	(27.51)	1200	2.54	34.46	27.51	65	1.18
CNAV OSHAWA; February 9, 1959; 0613 GCT; 57°20'N, 151°35'W; sounding, 33 fm; wind, 300°, 10 kt; weather, partly cloudy; sea, missing.										47
0	5.00	32.507	6.96	25.72	0	5.00	32.51	25.72	228	0.00
10	4.65	32.458	6.94	25.72	10	4.65	32.46	25.72	228	0.02
20	4.66	32.448	7.03	25.71	20	4.66	32.45	25.71	229	0.05
30	4.68	32.452	7.04	25.72	30	4.68	32.45	25.72	229	0.07
50	4.66	32.448	6.99	25.71	50	4.66	32.45	25.71	229	0.12

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
48	CNAV OSHAWA; February 9, 1959; 0857 GCT; 57°03'N, 151°16'W; sounding, 290 fm; wind, 300°, 10 kt; weather, partly cloudy; sea, missing.									
0	5.50	32.412	6.90	25.59	0	5.50	32.41	25.59	240	0.00
10	5.50	32.356	6.90	25.55	10	5.50	32.36	25.55	245	0.02
25	5.52	32.369	6.88	25.56	20	5.51	32.35	25.54	245	0.05
50	5.52	32.454	6.79	25.62	30	5.52	32.38	25.56	243	0.07
75	5.50	32.462	6.80	25.63	50	5.52	32.45	25.62	238	0.12
100	5.50	32.477	6.78	25.64	75	5.50	32.46	25.63	237	0.18
125	5.74	32.674	6.09	25.77	100	5.50	32.48	25.64	236	0.24
150	5.85	32.824	5.53	25.88	125	5.74	32.67	25.77	225	0.30
175	6.11	33.001	4.97	25.98	150	5.85	32.82	25.88	215	0.36
200	5.78	33.490	3.44	26.41	175	6.11	33.00	25.98	205	0.41
225	(5.70)a)	33.574	3.24	(26.49)	200	5.78	33.49	26.41	165	0.45
250	5.87	33.708	3.09	26.57	250	5.87	33.71	26.57	150	0.53
300	5.30	33.833	2.46	26.74	300	5.30	33.83	26.74	135	0.61
400	4.62	33.964	1.55	26.92	400	4.62	33.96	26.92	118	0.73
500	4.27	33.998	1.15	26.98	500	4.27	34.00	26.98	113	0.85
49	CNAV OSHAWA; February 9, 1959; 1158 GCT; 56°43'N, 151°10'W; sounding, 850 fm; wind, 310°, 35 kt; weather, clear; sea, slight.									
0	4.00	32.710	6.99	25.99	0	4.00	32.71	25.99	203	0.00
10	4.48	32.694	7.01	25.93	10	4.48	32.69	25.93	208	0.02
25	4.50	32.696	7.02	25.93	20	4.59	32.69	25.92	210	0.04
49	4.50	32.702	7.00	25.93	30	4.50	32.70	25.93	209	0.06
73	4.34	32.764	6.99	26.00	50	4.50	32.70	25.93	208	0.10
98	4.31	32.915	6.43	26.12	75	4.33	32.77	26.01	202	0.16
123	4.30	33.453	4.03	26.55	100	4.31	32.94	26.14	189	0.20
147	3.96	33.704	2.62	26.78	125	4.28	33.48	26.57	148	0.25
172	3.81	33.800	2.37	26.87	150	3.93	33.72	26.80	127	0.28
196	3.87	33.878	1.42	26.93	175	3.81	33.81	26.88	119	0.31
221	4.00	33.942	1.34	26.97	200	3.89	33.89	26.94	114	0.34
245	4.05	33.985	0.95	27.00	250	4.05	33.99	27.00	109	0.40
294	3.96	34.034	0.60	27.04	300	3.95	34.04	27.05	104	0.45
400	(3.81)a)	(34.100)a)	-	(27.11)	400	3.81	34.10	27.11	99	0.56
500	(3.67)a)	(34.162)a)	-	(27.18)	500	3.67	34.16	27.18	94	0.65
600	(3.52)a)	(34.215)a)	-	(27.23)	600	3.52	34.22	27.23	89	0.75
782	3.24	34.324	0.56	27.35	700	3.37	34.27	27.29	84	0.83
977	2.98	34.382	0.77	27.42	800	3.21	34.33	27.35	79	0.92
1173	2.67	34.438	0.58	27.49	1000	2.95	34.39	27.42	73	1.07
1200	(2.62)b)	(34.446)b)	-	(27.50)	1200	2.62	34.45	27.50	66	1.21
50	CNAV OSHAWA; February 9, 1959; 1742 GCT; 56°11'N, 150°26'W; sounding, 2750 fm; wind, 300°, 20 kt; weather, partly cloudy; sea, slight.									
0	3.90	32.864	7.27	26.12	0	3.90	32.86	26.12	190	0.00
10	3.87	32.838	7.32	26.10	10	3.87	32.84	26.10	192	0.02
25	3.87	32.842	7.31	26.11	20	3.86	32.83	26.10	192	0.04
49	3.90	32.850	7.22	26.11	30	3.87	32.84	26.11	192	0.06
74	3.84	32.868	7.17	26.13	50	3.90	32.85	26.11	191	0.10
98	4.14	33.595	3.08	26.68	75	3.85	32.88	26.14	188	0.14
123	4.17	33.810	1.87	26.85	100	4.15	33.63	26.71	135	0.18
147	4.13	33.896	1.83	26.92	125	4.17	33.82	26.85	122	0.22
172	4.10	33.944	1.00	26.96	150	4.13	33.90	26.92	115	0.25
197	4.05	33.972	0.86	26.99	175	4.10	33.95	26.96	112	0.28
221	4.04	33.998	0.82	27.01	200	4.05	33.98	26.99	110	0.30
246	4.02	34.026	0.69	27.03	250	4.01	34.03	27.04	105	0.36
295	3.88	34.088	0.59	27.10	300	3.87	34.09	27.10	100	0.41
392	3.78	34.157	0.45	27.16	400	3.77	34.16	27.17	94	0.51
489	3.59	34.218	0.47	27.23	500	3.57	34.22	27.23	88	0.60
586	3.42	34.263	0.47	27.28	600	3.40	34.27	27.29	84	0.69
781	3.08	34.348	0.50	27.38	700	3.22	34.31	27.34	80	0.77
976	2.81	34.420	0.50	27.46	800	3.05	34.36	27.39	75	0.85
1171	2.52	34.470	0.67	27.53	1000	2.78	34.43	27.47	68	0.99
1463	2.20	34.532	0.92	27.60	1200	2.48	34.48	27.54	62	1.12
1500	(2.17)b)	(34.539)b)	-	(27.61)	1500	2.17	34.54	27.61	56	1.31

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; February 9, 1959; 2314 GCT; 55°40'N, 149°55'W; sounding, 2350 fm; wind, 320°, 10 kt; weather, partly cloudy; sea, slight.										51
0	4.60	32.890	7.09	26.07	0	4.60	32.89	26.07	195	0.00
10	4.02	32.870	7.09	26.11	10	4.02	32.87	26.11	191	0.02
25	4.00	32.866	7.07	26.11	20	3.89	32.86	26.12	190	0.04
48	4.00	32.864	7.08	26.11	30	4.00	32.87	26.11	191	0.06
73	3.98	32.866	7.06	26.12	50	4.00	32.86	26.11	191	0.10
97	4.22	33.632	2.71	26.70	75	3.99	32.90	26.14	189	0.14
121	4.20	33.805	1.70	26.84	100	4.23	33.69	26.74	132	0.18
146	4.12	33.887	1.22	26.91	125	4.19	33.82	26.85	122	0.22
170	4.07	33.930	0.94	26.95	150	4.11	33.90	26.92	116	0.25
194	4.01	33.973	0.71	26.99	175	4.06	33.94	26.96	112	0.28
219	3.98	34.014	0.55	27.03	200	4.00	33.98	27.00	108	0.30
243	4.00	34.038	0.57	27.04	250	4.00	34.04	27.05	104	0.36
291	3.87	(34.080)a)	-	(27.09)	300	3.85	34.09	27.10	100	0.41
349	3.82	34.128	0.44	27.13	400	3.72	34.17	27.18	93	0.50
435	3.62	34.198	0.37	27.21	500	3.47	34.25	27.26	86	0.60
520	3.43	34.263	0.39	27.28	600	3.28	34.31	27.33	80	0.68
698	3.14	34.336	0.39	27.36	700	3.14	34.34	27.37	77	0.76
882	2.92	34.387	0.48	27.43	800	3.01	34.37	27.40	74	0.84
1072	2.63	34.439	0.53	27.49	1000	2.75	34.42	27.47	68	0.98
1364	2.31	34.508	0.76	27.57	1200	2.47	34.47	27.53	63	1.11
CNAV OSHAWA; February 10, 1959; 0721 GCT; 55°08'N, 151°25'W; sounding, 2150 fm; wind, 230°, 10 kt; weather, partly cloudy; sea, missing.										52
0	4.00	32.856	7.32	26.11	0	4.00	32.86	26.11	192	0.00
10	3.84	32.782	7.32	26.06	10	3.84	32.78	26.06	196	0.02
25	3.86	32.824	7.31	26.09	20	3.82	32.79	26.07	195	0.04
50	3.86	32.829	7.28	26.10	30	3.86	32.83	26.10	192	0.06
74	3.76	32.856	7.25	26.13	50	3.86	32.83	26.10	193	0.10
99	3.78	32.880	7.17	26.15	75	3.76	32.86	26.13	190	0.15
123	4.14	33.676	2.54	26.74	100	3.79	32.90	26.16	187	0.19
148	3.90	33.830	1.55	26.89	125	4.14	33.71	26.77	129	0.23
172	3.87	33.889	1.28	26.94	150	3.89	33.84	26.90	118	0.26
197	3.81	33.912	1.02	26.96	175	3.86	33.89	26.94	114	0.29
222	3.83	33.947	0.77	26.99	200	3.81	33.92	26.97	112	0.32
246	3.80	34.002	0.62	27.04	250	3.80	34.01	27.04	105	0.38
295	3.80	34.064	0.47	27.08	300	3.80	34.07	27.09	101	0.43
384	3.68	34.139	0.45	27.16	400	3.66	34.15	27.17	94	0.53
481	3.54	34.196	0.46	27.22	500	3.51	34.21	27.23	89	0.62
578	3.42	34.239	0.49	27.26	600	3.39	34.25	27.27	85	0.71
772	3.06	34.335	0.55	27.37	700	3.21	34.30	27.33	81	0.79
967	2.81	34.401	0.54	27.45	800	3.02	34.35	27.38	76	0.87
1161	2.52	34.459	0.64	27.52	1000	2.76	34.41	27.46	69	1.02
1454	2.20	34.530	0.91	27.60	1200	2.47	34.47	27.53	63	1.15
1500	(2.16)b)	(34.539)b)	-	(27.61)	1500	2.16	34.54	27.61	56	1.33

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
53	CNAV OSHAWA; February 10, 1959; 1553 GCT; 54°35'N, 153°00'W; sounding, 2350 fm; wind, 230°, 30 kt; weather, overcast; sea, moderate.									
0	4.00	32.896	7.08	26.14	0	4.00	32.90	26.14	188	0.00
10	3.84	32.876	7.04	26.14	10	3.84	32.88	26.14	189	0.02
23	3.87	32.880	7.04	26.14	20	3.84	32.88	26.14	189	0.04
46	3.88	32.878	7.06	26.13	30	3.88	32.88	26.14	189	0.06
69	3.84	32.884	7.03	26.14	50	3.88	32.88	26.14	189	0.10
92	3.84	32.886	7.02	26.14	75	3.84	32.88	26.14	188	0.14
115	3.92	32.993	6.31	26.22	100	3.86	32.91	26.16	187	0.19
138	3.95	33.784	1.75	26.85	125	3.94	33.25	26.43	162	0.23
160	3.95	33.895	1.04	26.94	150	3.95	33.92	26.96	112	0.27
183	3.88	33.936	0.76	26.97	175	3.91	33.93	26.97	111	0.30
206	3.95	33.980	0.60	27.00	200	3.92	33.97	27.00	109	0.32
228	3.90	34.009	0.58	27.03	250	3.86	34.04	27.06	104	0.38
274	3.84	34.063	0.43	27.08	300	3.81	34.09	27.10	99	0.43
370	3.76	34.142	0.47	27.15	400	3.72	34.16	27.17	94	0.53
462	3.62	34.204	0.43	27.21	500	3.54	34.22	27.24	88	0.62
555	3.39	34.248	0.47	27.27	600	3.30	34.27	27.30	83	0.70
738	3.11	34.327	0.49	27.36	700	3.15	34.31	27.34	79	0.79
923	2.86	34.394	0.57	27.44	800	3.02	34.35	27.39	75	0.86
1107	2.60	34.443	0.58	27.50	1000	2.75	34.42	27.46	69	1.01
1383	2.28	34.512	0.82	27.58	1200	2.48	34.47	27.53	63	1.14
54	CNAV OSHAWA; February 11, 1959; 0008 GCT; 53°45'N, 151°55'W; sounding, 2600 fm; wind, 270°, 35 kt; weather, overcast, smoke; sea, moderate.									
0	3.90	32.932	7.26	26.18	0	3.90	32.93	26.18	185	0.00
10	3.90	32.872	7.31	26.13	10	3.90	32.87	26.13	190	0.02
25	3.92	32.868	7.28	26.12	20	3.91	32.86	26.12	191	0.04
48	3.90	32.870	7.31	26.13	30	3.92	32.87	26.12	190	0.06
72	3.86	32.871	7.27	26.13	50	3.90	32.87	26.13	190	0.10
96	4.01	33.133	5.67	26.32	75	3.87	32.89	26.14	188	0.14
119	4.00	33.703	2.43	26.78	100	4.02	33.21	26.38	166	0.19
143	4.01	33.867	1.39	26.91	125	4.00	33.79	26.84	123	0.22
167	3.92	33.932	0.91	26.97	150	3.99	33.90	26.93	114	0.25
190	3.93	33.972	0.71	27.00	175	3.91	33.95	26.98	110	0.28
213	3.92	33.991	0.57	27.01	200	3.93	33.98	27.01	108	0.31
236	3.91	34.030	0.60	27.05	250	3.90	34.05	27.06	103	0.36
284	3.84	34.072	0.52	27.09	300	3.82	34.09	27.10	100	0.41
362	3.72	34.144	0.47	27.16	400	3.67	34.17	27.18	93	0.51
452	3.60	34.190	0.49	27.20	500	3.50	34.22	27.24	88	0.60
544	3.38	34.254	0.47	27.28	600	3.27	34.28	27.31	81	0.69
733	3.07	34.334	0.54	27.37	700	3.11	34.33	27.36	78	0.77
926	2.86	34.392	0.60	27.43	800	2.98	34.36	27.40	74	0.84
1119	2.56	34.449	0.74	27.51	1000	2.76	34.41	27.46	69	0.99
1411	2.30	34.512	0.86	27.58	1200	2.46	34.47	27.53	63	1.12

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

55

CNAV OSHAWA; February 11, 1959; 0759 GCT; 52°40'N, 150°30'W; sounding, 2100 fm; wind, 270°, 35 kt; weather, overcast; sea, rough.

0	5.10	32.812	7.10	25.95	0	5.10	32.81	25.95	206	0.00
10	4.62	32.792	7.17	25.99	10	4.62	32.79	25.99	202	0.02
24	4.64	32.792	7.29	25.99	20	4.55	32.79	26.00	202	0.04
47	4.65	32.794	7.27	25.99	30	4.65	32.79	25.99	203	0.06
70	4.49	32.860	7.01	26.06	50	4.64	32.80	25.99	202	0.10
93	3.94	33.501	3.84	26.62	75	4.40	32.95	26.14	189	0.15
116	3.86	33.769	2.17	26.84	100	3.87	33.62	26.73	133	0.19
138	3.84	33.848	1.58	26.91	125	3.85	33.82	26.89	118	0.22
161	3.82	33.894	1.18	26.95	150	3.83	33.88	26.93	114	0.25
185	3.78	33.937	0.93	26.99	175	3.80	33.92	26.97	111	0.28
207	3.86	33.964	0.81	27.00	200	3.82	33.96	27.00	109	0.31
230	3.81	33.989	0.67	27.02	250	3.79	34.01	27.04	104	0.36
276	3.78	34.042	0.57	27.07	300	3.76	34.07	27.09	101	0.41
392	3.66	34.136	0.54	27.16	400	3.65	34.14	27.16	94	0.51
490	3.50	34.204	0.48	27.23	500	3.48	34.21	27.23	88	0.60
587	3.32	34.259	0.56	27.29	600	3.30	34.27	27.29	83	0.69
784	2.96	34.354	0.57	27.40	700	3.11	34.32	27.35	78	0.77
980	2.76	34.411	0.60	27.46	800	2.94	34.36	27.40	74	0.85
1175	2.48	34.463	0.72	27.52	1000	2.74	34.42	27.47	69	1.00
1469	2.22	34.527	0.95	27.60	1200	2.45	34.47	27.53	63	1.13
1500	(2.20)a)	(34.533)a)	-	(27.60)	1500	2.20	34.53	27.60	57	1.31

56

CNAV OSHAWA; February 11, 1959; 1641 GCT; 51°35'N, 149°02'W; sounding, 2420 fm; wind, 280°, 40 kt; weather, cloudy; sea, moderate.

0	4.70	32.803	7.24	25.99	0	4.70	32.80	25.99	202	0.00
10	4.90	32.778	7.24	25.95	10	4.90	32.78	25.95	206	0.02
24	4.89	32.777	7.24	25.95	20	4.93	32.77	25.94	207	0.04
48	4.91	32.785	7.22	25.95	30	4.89	32.78	25.95	207	0.06
72	4.87	32.779	7.25	25.95	50	4.91	32.79	25.95	206	0.10
96	4.76	32.956	6.59	26.11	75	4.86	32.79	25.96	206	0.16
120	4.02	33.559	4.17	26.66	100	4.68	33.03	26.17	186	0.20
144	3.81	33.667	3.57	26.77	125	3.93	33.62	26.72	134	0.24
168	3.74	33.744	3.04	26.84	150	3.78	33.69	26.79	128	0.28
191	3.61	33.818	2.24	26.91	175	3.71	33.77	26.86	122	0.31
215	(3.57)b)	33.868	1.78	(26.95)	200	3.58	33.84	26.93	115	0.34
239	3.64	33.920	1.75	26.99	250	3.66	33.94	27.00	108	0.40
287	3.64	33.994	1.01	27.04	300	3.64	34.01	27.06	103	0.45
366	3.68	34.096	0.77	27.12	400	3.66	34.13	27.15	96	0.55
456	3.59	34.168	0.65	27.19	500	3.52	34.20	27.22	90	0.64
547	3.42	34.232	0.69	27.26	600	3.33	34.26	27.29	84	0.73
728	3.11	34.322	0.54	27.36	700	3.16	34.31	27.34	79	0.81
909	2.88	34.402	1.05	27.44	800	3.01	34.36	27.39	75	0.89
1089	2.62	34.446	0.63	27.50	1000	2.75	34.43	27.47	68	1.04
1361	2.34	34.507	0.77	27.57	1200	2.49	34.47	27.53	63	1.17

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
57	CNAV OSHAWA; February 12, 1959; 0053 GCT; 50°20'N, 147°36'W; sounding, missing; wind, 310°, 45 kt; weather, slight showers of rain and snow; sea, moderate.									
0	5.20	32.777	6.97	25.92	0	5.20	32.78	25.92	210	0.00
10	5.24	32.758	6.96	25.90	10	5.24	32.76	25.90	212	0.02
24	5.25	32.757	7.03	25.89	20	5.25	32.75	25.89	212	0.04
47	5.26	32.756	6.87	25.89	30	5.25	32.76	25.89	212	0.06
71	5.14	32.814	6.89	25.95	50	5.25	32.76	25.90	212	0.11
95	5.10	32.848	6.78	25.98	75	5.13	32.82	25.96	206	0.16
118	4.24	33.670	4.23	26.73	100	4.98	32.96	26.09	194	0.21
142	4.01	33.765	3.83	26.83	125	4.10	33.78	26.83	124	0.25
165	3.86	33.778	3.56	26.85	150	3.95	33.78	26.84	123	0.28
188	3.68	33.801	3.18	26.89	175	3.79	33.79	26.87	121	0.31
211	3.60	33.825	2.89	26.91	200	3.63	33.81	26.90	117	0.34
235	3.55	33.848	2.44	26.94	250	3.54	33.87	26.95	113	0.40
282	3.56	33.920	1.69	26.99	300	3.57	33.94	27.01	108	0.46
335	3.62	33.983	1.28	27.04	400	3.62	34.08	27.11	99	0.56
420	3.61	34.114	0.91	27.14	500	3.53	34.18	27.21	91	0.66
510	3.51	34.189	0.78	27.21	600	3.38	34.25	27.27	85	0.74
695	3.21	34.297	0.71	27.33	700	3.20	34.30	27.33	80	0.83
884	2.94	34.375	0.62	27.41	800	3.06	34.34	27.38	76	0.91
1078	2.65	34.440	0.72	27.49	1000	2.77	34.42	27.46	69	1.05
58	CNAV OSHAWA; February 12, 1959; 0754 GCT; 48°52'N, 147°14'W; sounding, 2500 fm; wind, 290°, 40 kt; weather, partly cloudy, precipitation within sight; sea, rough.									
0	5.40	32.937	7.21	26.02	0	5.40	32.94	26.02	200	0.00
9	5.64	32.884	7.16	25.95	10	5.66	32.88	25.94	207	0.02
23	5.64	32.882	7.00	25.95	20	5.68	32.87	25.94	208	0.04
46	5.65	32.885	7.12	25.95	30	5.64	32.88	25.95	207	0.06
69	5.63	32.883	7.15	25.95	50	5.65	32.89	25.95	207	0.10
92	5.63	32.882	7.12	25.95	75	5.63	32.88	25.95	207	0.16
114	5.61	33.070	6.64	26.10	100	5.62	32.93	25.99	204	0.21
136	5.55	33.507	5.82	26.45	125	5.59	33.26	26.25	179	0.26
159	5.49	33.757	4.84	26.66	150	5.51	33.68	26.60	147	0.30
182	5.02	33.804	4.39	26.75	175	5.21	33.81	26.73	134	0.33
204	4.77	33.808	4.14	26.78	200	4.80	33.81	26.78	130	0.37
227	4.48	33.823	3.84	26.82	250	4.27	33.84	26.86	122	0.43
273	4.13	33.864	3.17	26.89	300	3.99	33.89	26.93	116	0.49
392	3.84	34.000	1.77	27.03	400	3.83	34.01	27.04	106	0.60
490	3.79	34.122	1.19	27.13	500	3.78	34.13	27.14	98	0.70
588	3.63	34.195	0.96	27.21	600	3.61	34.20	27.21	91	0.80
784	3.20	34.302	0.72	27.33	700	3.40	34.26	27.28	85	0.89
980	2.96	34.377	0.66	27.41	800	3.17	34.31	27.34	80	0.97
1176	2.62	34.444	0.53	27.50	1000	2.93	34.38	27.42	73	1.13
1471	2.30	34.514	0.81	27.58	1200	2.59	34.45	27.51	66	1.27
1500	(2.28)a)	(34.519)a)	-	(27.59)	1500	2.28	34.52	27.59	59	1.46

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; February 13, 1959; 0016 GCT; 49°03'N, 143°00'W; sounding, 2250 fm; wind, 310°, 40 kt; weather, slight showers of rain and snow; sea, very rough.										59
0	6.00	32.886	6.99	25.91	0	6.00	32.89	25.91	210	0.00
10	6.12	32.868	7.01	25.88	10	6.12	32.87	25.88	213	0.02
25	6.11	32.871	7.01	25.88	20	6.14	32.87	25.87	214	0.04
50	6.13	32.866	7.02	25.87	30	6.11	32.87	25.88	213	0.06
74	6.10	32.865	7.00	25.88	50	6.13	32.87	25.87	214	0.11
99	6.12	32.869	7.03	25.88	75	6.10	32.87	25.88	214	0.16
123	6.17	33.111	6.48	26.06	100	6.12	32.87	25.88	214	0.22
148	5.92	33.612	5.45	26.49	125	6.16	33.14	26.09	195	0.27
173	5.53	33.732	4.98	26.63	150	5.89	33.64	26.51	155	0.31
197	4.90	33.767	4.52	26.73	175	5.49	33.74	26.64	143	0.35
222	4.66	33.796	4.14	26.78	200	4.85	33.77	26.74	133	0.38
246	4.46	33.819	3.67	26.82	250	4.43	33.82	26.83	125	0.45
296	4.09	33.888	2.60	26.92	300	4.07	33.89	26.92	117	0.51
394	4.00	34.024	1.64	27.03	400	3.99	34.03	27.04	106	0.62
492	3.87	34.108	1.10	27.11	500	3.86	34.11	27.12	100	0.73
590	3.68	34.186	0.84	27.19	600	3.66	34.19	27.20	92	0.82
786	3.33	34.296	0.65	27.31	700	3.48	34.26	27.27	87	0.91
982	2.95	34.373	0.57	27.41	800	3.30	34.30	27.32	82	1.00
1178	2.68	34.441	0.52	27.49	1000	2.92	34.38	27.42	73	1.16
1200	(2.66)a)	(34.448)a)	-	(27.50)	1200	2.66	34.45	27.50	67	1.30
CNAV OSHAWA; February 13, 1959; 0712 GCT; 48°35'N, 141°15'W; sounding, 2400 fm; wind, 310°, 30 kt; weather, slight showers of rain and snow; sea, moderate.										60
0	6.40	32.938	6.97	25.90	0	6.40	32.94	25.90	211	0.00
10	6.68	32.942	6.93	25.86	10	6.68	32.94	25.86	215	0.02
25	6.68	32.942	6.97	25.86	20	6.74	32.94	25.86	215	0.04
50	6.69	32.940	6.87	25.86	30	6.68	32.94	25.86	215	0.06
75	6.68	32.942	6.93	25.86	50	6.69	32.94	25.86	215	0.11
100	6.67	32.944	6.89	25.87	75	6.68	32.94	25.86	216	0.16
125	6.96	33.526	5.84	26.29	100	6.67	32.94	25.87	216	0.22
150	6.80	33.762	5.13	26.49	125	6.96	33.53	26.29	176	0.27
175	6.18	33.826	5.03	26.62	150	6.80	33.76	26.49	157	0.31
200	(5.80)b)	(33.850)b)	-	(26.69)	175	6.18	33.83	26.62	145	0.35
225	(5.40)b)	(33.880)b)	-	(26.76)	200	5.80	33.85	26.69	138	0.38
250	(5.10)b)	(33.900)b)	-	(26.81)	250	5.10	33.90	26.81	127	0.45
300	(4.70)b)	(33.930)b)	-	(26.88)	300	4.70	33.93	26.88	121	0.51
394	4.29	34.003	1.84	26.99	400	4.27	34.01	26.99	111	0.63
492	4.04	34.080	1.27	27.07	500	4.02	34.09	27.08	103	0.74
590	3.77	34.163	0.78	27.17	600	3.75	34.17	27.17	95	0.84
786	3.37	34.288	0.64	27.30	700	3.52	34.24	27.25	88	0.93
983	2.96	34.367	0.52	27.41	800	3.34	34.30	27.31	83	1.02
1179	2.68	34.435	0.52	27.48	1000	2.93	34.37	27.41	74	1.17
1475	2.35	34.501	0.74	27.57	1200	2.65	34.44	27.49	67	1.32
1500	(2.33)a)	(34.505)a)	-	(27.57)	1500	2.33	34.50	27.57	60	1.51

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
61	CNAV OSHAWA; February 13, 1959; 1456 GCT; 48°00'N, 139°35'W; sounding, 2200 fm; wind, 360°, 30 kt; weather, slight showers of rain and snow; sea, moderate.									
0	7.40	32.806	6.54	25.66	0	7.40	32.81	25.66	234	0.00
10	7.62	32.788	6.57	25.61	10	7.62	32.79	25.61	238	0.02
24	7.62	32.785	6.61	25.61	20	7.66	32.78	25.61	239	0.05
49	7.62	32.787	6.56	25.61	30	7.62	32.78	25.61	239	0.07
73	7.56	32.797	6.59	25.63	50	7.62	32.79	25.61	239	0.12
97	7.57	32.802	6.54	25.63	75	7.56	32.80	25.63	238	0.18
121	7.60	32.870	6.47	25.68	100	7.57	32.81	25.64	238	0.24
145	6.94	33.307	5.64	26.12	125	7.54	32.92	25.73	229	0.30
169	6.42	(33.598)a)	5.05	(26.41)	150	6.82	33.38	26.19	186	0.35
193	6.26	33.742	5.02	26.55	175	6.35	33.65	26.46	160	0.39
217	5.96	33.800	4.77	26.63	200	6.19	33.77	26.58	149	0.43
241	5.54	33.826	4.56	26.70	250	5.41	33.84	26.73	136	0.50
288	5.06	33.876	3.30	26.80	300	4.97	33.89	26.82	127	0.57
361	4.71	33.922	2.46	26.88	400	4.55	33.96	26.92	118	0.70
452	4.35	34.024	1.33	27.00	500	4.17	34.07	27.05	107	0.81
542	4.01	34.096	1.15	27.09	600	3.85	34.14	27.14	98	0.91
730	3.67	34.251	0.47	27.25	700	3.69	34.23	27.22	91	1.01
919	3.41	34.340	0.34	27.34	800	3.56	34.29	27.29	86	1.10
1113	2.98	34.419	0.40	27.45	1000	3.25	34.37	27.38	77	1.26
1408	2.56	34.491	0.66	27.54	1200	2.83	34.45	27.48	69	1.41
62	CNAV OSHAWA; February 13, 1959; 2048 GCT; 47°55'N, 137°41'W; sounding, 2280 fm; wind, 360°, 35 kt; weather, slight showers of rain and snow; sea, moderate.									
0	7.10	32.748	6.90	25.66	0	7.10	32.75	25.66	234	0.00
10	7.19	32.735	6.90	25.63	10	7.19	32.73	25.63	237	0.02
25	7.18	32.731	6.90	25.63	20	7.20	32.73	25.63	237	0.05
50	7.26	32.757	6.90	25.64	30	7.19	32.73	25.63	237	0.07
75	7.24	32.768	6.92	25.65	50	7.26	32.76	25.64	236	0.12
100	7.30	32.855	6.66	25.71	75	7.24	32.77	25.65	236	0.18
125	6.50	33.326	5.76	26.19	100	7.30	32.86	25.71	230	0.24
150	5.84	33.568	5.29	26.46	125	6.50	33.33	26.19	185	0.29
175	5.66	33.713	5.12	26.60	150	5.84	33.57	26.46	159	0.33
200	5.28	33.764	4.49	26.69	175	5.66	33.71	26.60	147	0.37
225	5.16	33.802	4.22	26.73	200	5.28	33.76	26.69	139	0.41
250	4.92	33.823	3.99	26.77	250	4.92	33.82	26.77	131	0.48
300	4.59	33.889	2.98	26.86	300	4.59	33.89	26.86	123	0.54
370	4.33	33.956	1.86	26.94	400	4.23	33.99	26.98	112	0.66
462	4.04	34.062	1.32	27.06	500	3.95	34.10	27.09	102	0.77
556	3.85	34.134	0.97	27.14	600	3.76	34.16	27.17	96	0.86
747	3.42	34.256	0.65	27.27	700	3.53	34.23	27.24	89	0.96
948	3.09	34.351	0.52	27.38	800	3.32	34.28	27.31	84	1.05
1130	2.70	34.433	0.52	27.48	1000	2.99	34.37	27.41	74	1.21
1422	2.35	34.503	0.74	27.57	1200	2.59	34.46	27.51	65	1.35

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

63

CNAV OSHAWA; February 14, 1959; 0350 GCT; 47°25'N, 135°57'W; sounding, 2200 fm; wind, 360°, 30 kt; weather, slight showers of rain and snow; sea, moderate.

0	7.80	32.723	6.72	25.54	0	7.80	32.72	25.54	246	0.00
10	7.94	32.709	6.71	25.51	10	7.94	32.71	25.51	249	0.02
25	7.94	32.718	6.75	25.51	20	7.97	32.71	25.50	249	0.05
50	7.95	32.708	6.75	25.50	30	7.94	32.72	25.51	248	0.08
75	7.92	32.718	6.72	25.52	50	7.95	32.71	25.50	249	0.12
100	7.94	32.720	6.74	25.52	75	7.92	32.72	25.52	249	0.19
125	6.98	33.220	5.81	26.04	100	7.94	32.72	25.52	249	0.25
150	6.42	33.496	5.17	26.33	125	6.98	33.22	26.04	199	0.31
175	6.18	33.693	4.93	26.52	150	6.42	33.50	26.33	172	0.35
200	5.93	33.766	4.58	26.61	175	6.18	33.69	26.52	154	0.39
225	5.74	33.827	4.23	26.68	200	5.93	33.77	26.61	146	0.43
250	5.48	33.856	3.79	26.73	250	5.48	33.86	26.73	135	0.50
300	4.93	33.888	3.15	26.82	300	4.93	33.89	26.82	126	0.57
373	4.67	33.958	1.97	26.91	400	4.55	33.98	26.94	116	0.69
466	4.19	34.044	1.31	27.03	500	4.07	34.07	27.06	105	0.80
562	3.94	34.117	0.81	27.11	600	3.84	34.15	27.14	98	0.91
758	3.43	34.258	0.62	27.28	700	3.58	34.22	27.23	90	1.00
954	3.12	34.343	0.48	27.37	800	3.35	34.28	27.30	84	1.09
1150	2.81	34.419	0.41	27.46	1000	3.05	34.36	27.39	76	1.25
1444	2.43	34.499	0.77	27.56	1200	2.74	34.44	27.48	68	1.40

64

CNAV OSHAWA; February 14, 1959; 1058 GCT; 47°26'N, 134°27'W; sounding, 2150 fm; wind, 020°, 10 kt; weather, moderate rain showers; sea, slight.

0	7.60	32.617	6.74	25.48	0	7.60	32.62	25.48	251	0.00
10	7.92	32.661	6.79	25.47	10	7.92	32.66	25.47	252	0.02
24	7.94	32.658	6.74	25.47	20	7.99	32.67	25.47	252	0.05
47	7.95	32.660	6.82	25.47	30	7.95	32.66	25.47	253	0.08
71	7.93	32.660	6.79	25.47	50	7.95	32.66	25.47	253	0.13
94	7.94	32.660	6.79	25.47	75	7.93	32.66	25.47	253	0.19
117	7.61	32.853	6.38	25.67	100	7.89	32.69	25.50	250	0.25
139	6.66	33.344	5.59	26.18	125	7.34	33.00	25.82	221	0.31
163	6.45	33.597	5.35	26.41	150	6.46	33.50	26.33	172	0.36
186	6.25	33.724	5.26	26.54	175	6.35	33.68	26.49	158	0.40
210	5.81	33.808	4.67	26.66	200	6.02	33.78	26.61	146	0.44
233	5.66	33.849	4.52	26.71	250	5.48	33.87	26.75	134	0.51
280	5.01	33.893	3.33	26.82	300	4.84	33.91	26.85	124	0.58
358	4.72	33.944	2.13	26.89	400	4.54	33.98	26.94	116	0.70
447	4.31	34.033	1.27	27.01	500	4.15	34.08	27.07	105	0.81
536	4.07	34.118	0.83	27.10	600	3.91	34.17	27.16	97	0.91
718	3.65	34.252	0.53	27.25	700	3.69	34.24	27.24	90	1.01
898	3.29	34.344	0.41	27.36	800	3.48	34.30	27.30	84	1.10
1082	2.94	34.414	0.48	27.44	1000	3.09	34.39	27.41	75	1.26
1362	2.50	34.492	0.76	27.55	1200	2.74	34.45	27.49	67	1.40

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
65	CNAV OSHAWA; February 14, 1959; 1801 GCT; 47°23'N, 132°43'W; sounding, 2100 fm; wind, calm; weather, partly cloudy; sea, missing.									
0	9.40	32.686	6.37	25.27	0	9.40	32.69	25.27	271	0.00
10	8.98	32.672	6.34	25.32	10	8.98	32.67	25.32	266	0.03
25	8.98	32.669	6.38	25.32	20	8.90	32.67	25.33	266	0.05
50	9.00	32.675	6.29	25.32	30	8.98	32.67	25.32	267	0.08
75	8.84	32.696	6.28	25.36	50	9.00	32.67	25.32	267	0.13
100	7.52	33.227	5.44	25.97	75	8.84	32.70	25.36	264	0.20
125	7.19	33.506	5.25	26.24	100	7.52	33.23	25.97	206	0.26
150	6.96	33.668	5.12	26.40	125	7.19	33.51	26.24	181	0.31
175	6.64	33.783	5.00	26.53	150	6.96	33.67	26.40	166	0.35
200	6.38	33.852	4.40	26.62	175	6.64	33.78	26.53	154	0.39
225	6.04	33.883	3.84	26.69	200	6.38	33.85	26.62	146	0.43
250	5.82	33.890	3.55	26.72	250	5.82	33.89	26.72	136	0.50
300	5.04	33.910	3.05	26.83	300	5.04	33.91	26.83	126	0.57
386	4.53	33.983	1.81	26.94	400	4.47	34.00	26.96	114	0.69
483	4.20	34.068	1.50	27.05	500	4.15	34.08	27.06	105	0.80
579	3.94	34.137	0.77	27.13	600	3.89	34.15	27.15	98	0.90
773	3.52	34.263	0.40	27.27	700	3.66	34.22	27.22	91	1.00
967	3.20	34.375	0.34	27.39	800	3.47	34.28	27.29	85	1.09
1150	2.86	34.433	0.37	27.47	1000	3.14	34.39	27.41	75	1.25
1376	2.47	34.494	0.56	27.55	1200	2.77	34.45	27.49	68	1.40
66	CNAV OSHAWA; February 15, 1959; 0219 GCT; 47°19'N, 130°51'W; sounding, 1450 fm; wind, calm; weather, partly cloudy; sea, calm.									
0	9.40	32.650	6.62	25.24	0	9.40	32.65	25.24	274	0.00
10	9.36	32.608	6.55	25.21	10	9.36	32.61	25.21	277	0.03
25	9.37	32.604	6.53	25.21	20	9.36	32.60	25.20	278	0.06
50	9.36	32.606	6.52	25.21	30	9.37	32.60	25.21	278	0.08
75	9.08	32.714	6.29	25.34	50	9.36	32.61	25.21	278	0.14
100	7.58	33.068	5.64	25.84	75	9.08	32.71	25.34	266	0.21
125	7.09	33.394	5.42	26.16	100	7.58	33.07	25.84	218	0.27
150	6.91	33.582	5.17	26.34	125	7.09	33.39	26.16	188	0.32
175	6.79	33.724	5.00	26.46	150	6.91	33.58	26.34	172	0.36
200	6.51	33.823	4.80	26.58	175	6.79	33.72	26.46	160	0.41
225	6.26	33.862	4.49	26.64	200	6.51	33.82	26.58	149	0.45
250	6.05	33.882	4.09	26.69	250	6.05	33.88	26.69	140	0.52
300	5.51	33.907	3.39	26.77	300	5.51	33.91	26.77	132	0.59
400	4.74	33.971	2.08	26.91	400	4.74	33.97	26.91	119	0.71
500	4.37	34.049	1.23	27.01	500	4.37	34.05	27.01	110	0.83
600	4.02	34.133	1.09	27.12	600	4.02	34.13	27.12	101	0.94
800	3.60	34.270	0.62	27.27	700	3.76	34.21	27.20	93	1.03
1000	3.23	34.378	0.45	27.39	800	3.60	34.27	27.27	88	1.13
1200	2.88	34.456	0.45	27.48	1000	3.23	34.38	27.39	77	1.29
1500	2.39	34.534	0.81	27.59	1200	2.88	34.46	27.48	68	1.44
					1500	2.39	34.53	27.59	59	1.63

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; February 15, 1959; 0854 GCT; 47°20'N, 129°13'W; sounding, 1450 fm; wind, calm; weather, partly cloudy; sea, calm.										67
0	9.00	32.503	6.38	25.19	0	9.00	32.50	25.19	279	0.00
10	8.97	32.478	6.35	25.17	10	8.97	32.48	25.17	280	0.03
25	8.98	32.480	6.36	25.17	20	8.97	32.47	25.17	281	0.06
50	8.97	32.499	6.35	25.19	30	8.98	32.48	25.17	281	0.08
75	8.86	32.510	6.36	25.21	50	8.97	32.50	25.19	280	0.14
100	7.67	32.884	5.45	25.68	75	8.86	32.51	25.21	278	0.21
125	7.20	33.225	5.08	26.02	100	7.67	32.88	25.68	233	0.28
150	6.92	33.506	4.51	26.28	125	7.20	33.22	26.02	202	0.33
175	6.86	33.705	4.03	26.44	150	6.92	33.51	26.28	178	0.38
200	6.78	33.792	3.65	26.52	175	6.86	33.70	26.44	162	0.42
225	6.64	33.868	3.45	26.60	200	6.78	33.79	26.52	155	0.46
250	6.31	33.906	3.05	26.67	250	6.31	33.91	26.67	141	0.54
300	5.72	33.938	2.46	26.77	300	5.72	33.94	26.77	132	0.60
391	5.12	33.985	1.69	26.88	400	5.06	33.99	26.89	121	0.73
489	4.53	34.060	1.09	27.00	500	4.48	34.07	27.02	110	0.85
586	4.13	34.138	0.73	27.11	600	4.08	34.15	27.12	100	0.96
782	3.77	34.260	0.43	27.24	700	3.85	34.21	27.20	94	1.05
977	3.40	34.382	0.39	27.38	800	3.74	34.27	27.26	89	1.15
1172	3.06	34.450	0.73	27.46	1000	3.36	34.39	27.39	77	1.31
1465	2.50	34.511	0.41	27.56	1200	3.01	34.46	27.47	70	1.46
1500	(2.43)a)	(34.515)a)	-	(27.57)	1500	2.43	34.51	27.57	61	1.66
CNAV OSHAWA; February 15, 1959; 1515 GCT; 47°19'N, 127°40'W; sounding, 1450 fm; wind, 110°, 10 kt; weather, overcast; sea, slight.										68
0	8.40	32.451	6.79	25.24	0	8.40	32.45	25.24	274	0.00
10	8.46	32.396	6.75	25.19	10	8.46	32.40	25.19	279	0.03
25	8.45	32.396	6.70	25.19	20	8.47	32.38	25.18	280	0.06
50	8.50	32.403	6.70	25.19	30	8.45	32.40	25.19	279	0.08
75	7.51	33.040	5.28	25.83	50	8.50	32.40	25.19	280	0.14
100	7.02	33.380	4.69	26.16	75	7.51	33.04	25.83	219	0.20
125	7.08	33.640	4.09	26.36	100	7.02	33.38	26.16	188	0.25
150	6.84	33.789	3.79	26.51	125	7.08	33.64	26.36	169	0.30
175	6.78	33.868	3.48	26.58	150	6.84	33.79	26.51	156	0.34
200	6.68	33.921	3.06	26.63	175	6.78	33.87	26.58	149	0.38
225	6.47	33.954	2.55	26.69	200	6.68	33.92	26.63	144	0.42
250	6.32	33.969	2.31	26.72	250	6.32	33.97	26.72	137	0.49
300	5.86	34.002	1.88	26.80	300	5.86	34.00	26.80	129	0.55
380	5.24	34.066	1.21	26.93	400	5.12	34.08	26.96	115	0.68
476	4.76	34.152	0.73	27.05	500	4.66	34.17	27.08	105	0.79
574	4.41	34.198	0.55	27.13	600	4.33	34.21	27.15	98	0.89
768	3.86	34.312	0.39	27.28	700	4.03	34.27	27.22	92	0.99
964	3.45	34.390	0.37	27.38	800	3.78	34.33	27.30	85	1.08
1161	3.01	34.452	0.47	27.47	1000	3.37	34.40	27.40	77	1.24
1459	2.49	34.529	0.78	27.58	1200	2.93	34.46	27.48	69	1.39
1500	(2.43)a)	(34.538)a)	-	(27.59)	1500	2.43	34.54	27.59	59	1.58

a) Value extrapolated by three-point parabolic method.

69 CNAV OSHAWA; February 15, 1959; 2200 GCT; 47°30'N, 126°32'W; sounding, 1400 fm; wind, 020°, 35 kt; weather, overcast; sea, moderate.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
0	9.10	32.451	6.53	25.13	0	9.10	32.45	25.13	284	0.00
10	8.98	32.424	6.48	25.13	10	8.98	32.42	25.13	285	0.03
25	8.93	32.418	6.56	25.13	20	8.93	32.42	25.13	285	0.06
50	8.97	32.421	6.59	25.13	30	8.93	32.42	25.13	285	0.09
75	9.40	33.191	4.73	25.66	50	8.97	32.42	25.13	285	0.14
99	8.64	33.473	4.03	26.00	75	9.40	33.19	25.66	235	0.21
123	8.20	33.618	3.57	26.18	100	8.62	33.48	26.01	202	0.26
148	8.08	33.757	3.17	26.31	125	8.18	33.63	26.19	185	0.31
173	7.78	33.846	2.79	26.42	150	8.06	33.77	26.32	174	0.36
197	7.53	33.910	2.55	26.51	175	7.76	33.85	26.43	164	0.40
222	7.17	33.949	2.54	26.59	200	7.49	33.92	26.52	156	0.44
247	6.90	33.981	2.24	26.65	250	6.86	33.98	26.66	143	0.52
262	6.66	33.988	2.09	26.69	300	6.17	34.01	26.77	133	0.58
391	5.72	34.062	1.29	26.87	400	5.66	34.07	26.88	123	0.71
488	5.08	34.113	0.91	26.99	500	5.02	34.12	27.00	112	0.83
586	4.65	34.188	0.62	27.09	600	4.60	34.20	27.11	103	0.94
781	4.03	34.306	0.41	27.25	700	4.25	34.26	27.20	95	1.04
977	3.60	34.386	0.37	27.36	800	3.98	34.32	27.27	88	1.13
1168	3.05	34.459	0.49	27.47	1000	3.54	34.40	27.37	79	1.30
1446	2.57	34.527	0.78	27.57	1200	2.98	34.47	27.49	69	1.45
1500	(2.52)a)	(34.535)a)	-	(27.58)	1500	2.52	34.53	27.58	60	1.65

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 1, 1959; 0000 GCT;[a] 48°43'N, 123°27'W; sounding, 45 fm; wind, 140°, 5 kt; weather, moderate rain showers; sea, calm.										1
0	8.10	26.306	6.88	20.48	0	8.10	26.31	20.48	729	0.00
2	7.83	28.661	6.48	22.36	10	7.80	29.80	23.25	464	0.06
6	7.80	29.698	6.11	23.17	20	7.84	29.95	23.36	453	0.11
10	7.80	29.802	6.13	23.25	30	7.86	30.05	23.44	446	0.15
20	7.84	29.948	6.13	23.36	50	7.85	30.19	23.55	435	0.24
40	7.85	30.102	6.11	23.48	75	7.86	30.33	23.66	426	0.35
60	7.85	30.295	5.95	23.63						
75	7.86	30.332	5.91	23.66						
CNAV OSHAWA; April 1, 1959; 0205 GCT; 48°33.5'N, 123°32.5'W; sounding, 52 fm; wind, 140°, 5 kt; weather, moderate rain showers; sea, calm.										2
0	8.00	27.552	6.75	21.47	0	8.00	27.55	21.47	634	0.00
2	7.79	27.672	6.65	21.59	10	7.77	29.51	23.03	485	0.06
6	7.78	28.196	6.57	22.00	20	7.78	29.65	23.13	475	0.10
10	7.77	29.512	6.28	23.03	30	7.78	29.74	23.21	468	0.15
20	7.78	29.647	6.07	23.13	50	7.80	29.88	23.32	458	0.24
39	7.78	29.798	6.10	23.25	75	7.84	30.05	23.44	446	0.36
59	7.82	29.955	6.05	23.37						
79	7.85	30.072	6.01	23.46						
89	(7.86)b)	30.102	5.63	(23.48)						
CNAV OSHAWA; April 1, 1959; 0426 GCT; 48°41'N, 123°30'W; sounding, 45 fm; wind, 220°, 5 kt; weather, moderate rain showers; sea, calm.										3
0	8.10	14.035	7.65	10.91	0	8.10	14.03	10.91	1657	0.00
2	7.90	29.162	6.38	22.74	10	7.75	29.39	22.94	494	0.11
6	7.83	29.352	6.25	22.90	20	7.76	29.48	23.00	487	0.16
10	7.75	29.390	6.32	22.94	30	7.77	29.63	23.12	476	0.20
20	7.76	29.478	6.27	23.00	50	7.77	29.90	23.33	456	0.30
40	7.77	29.836	5.87	23.28	75	7.83	30.11	23.49	441	0.41
60	7.78	29.882	5.67	23.32						
80	7.86	30.228	6.05	23.58						
CNAV OSHAWA; April 1, 1959; 0607 GCT; 48°38'N, 123°30'W; sounding, 105 fm; wind, calm; weather, moderate rain showers; sea, calm.										4
0	8.30	27.464	6.87	21.36	0	8.30	27.46	21.36	645	0.00
2	7.96	28.473	6.56	22.19	10	7.72	29.44	22.98	490	0.06
6	7.98	29.366	5.99	22.89	20	7.67	29.52	23.05	483	0.11
10	7.72	29.436	5.88	22.98	30	7.68	29.63	23.13	475	0.15
20	7.67	29.524	5.73	23.05	50	7.78	29.86	23.30	459	0.25
40	7.75	29.744	6.01	23.21	75	7.87	30.14	23.51	440	0.36
60	7.80	29.988	5.76	23.40	100	8.46	30.54	23.74	418	0.47
80	7.90	30.191	5.40	23.54	125	9.10	31.03	24.02	392	0.57
100	8.46	30.540	2.40	23.74	150	9.10	31.20	24.15	380	0.67
125	9.10	31.032	0.49	24.02	175	9.09	31.25	24.19	376	0.76
150	9.10	31.199	0.26	24.15						
185	9.08	31.233	0.37	24.18						
CNAV OSHAWA; April 1, 1959; 0801 GCT; 48°34'N, 123°30.5'W; sounding, 115 fm; wind, calm; weather, moderate rain showers; sea, calm.										5
0	8.20	28.492	5.96	22.17	0	8.20	28.49	22.17	566	0.00
2	8.04	28.795	5.80	22.43	10	7.71	29.47	23.00	487	0.05
6	7.80	29.395	5.54	22.93	20	7.82	29.55	23.05	483	0.10
10	7.71	29.468	5.59	23.00	30	7.86	29.66	23.13	475	0.15
20	7.82	29.548	5.00	23.05	50	7.84	29.90	23.32	457	0.24
40	7.84	29.807	5.10	23.25	75	8.00	30.13	23.48	443	0.36
60	7.84	29.971	4.98	23.38	100	8.57	30.58	23.75	417	0.46
80	8.08	30.186	3.98	23.51	125	9.08	31.14	24.11	383	0.56
100	8.57	30.579	1.94	23.75	150	9.03	31.19	24.15	380	0.66
125	9.08	31.143	0.55	24.11	175	9.06	31.23	24.18	377	0.76
150	9.03	31.186	0.00	24.15	200	9.12	31.25	24.19	377	0.85
175	9.06	31.228	0.00	24.18						
210	9.15	31.248	0.00	24.18						

a) At inshore stations observations were made to a maximum depth of 400 meters. At offshore stations data were collected to a depth of 1500 meters. Although not indicated in the tabulation, two casts were made, the first to 250 meters. The time reported is the time of the messenger release of the shallow cast. On the deep stations (over 400 meters) the messenger for the deep cast was usually released 30 to 40 minutes later.

b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
6	CNAV OSHAWA; April 1, 1959; 1422 GCT; 48°46.5'N, 123°03'W; sounding, 105 fm; wind, 180°, 3 kt; weather, moderate rain showers; sea, calm.									
0	8.00	30.036	5.93	23.41	0	8.00	30.04	23.41	448	0.00
2	7.85	30.072	5.82	23.46	10	7.86	30.09	23.47	442	0.04
6	7.88	30.084	5.79	23.46	20	7.86	30.22	23.57	433	0.09
10	7.86	30.093	5.87	23.47	30	7.86	30.28	23.62	429	0.13
20	7.86	30.220	5.83	23.57	50	7.86	30.28	23.61	429	0.22
40	7.86	30.270	5.93	23.61	75	7.86	30.29	23.63	428	0.33
60	7.86	30.269	5.95	23.61	100	7.88	30.47	23.76	416	0.43
80	7.86	30.307	5.93	23.64	125	7.90	30.60	23.86	407	0.54
100	7.88	30.468	5.88	23.76	150	7.90	30.65	23.90	403	0.64
125	7.90	30.596	5.84	23.86	175	7.92	30.79	24.01	393	0.74
150	7.90	30.647	5.70	23.90						
190	7.94	30.920	5.62	24.11						
7	CNAV OSHAWA; April 1, 1959; 1557 GCT; 48°43.5'N, 122°58.5'W; sounding, 82 fm; wind, 180°, 2 kt; weather, moderate rain showers; sea, calm.									
0	8.10	29.844	6.18	23.24	0	8.10	29.84	23.24	464	0.00
2	7.80	29.740	6.13	23.20	10	7.82	29.94	23.36	453	0.05
6	7.81	29.806	6.13	23.25	20	7.83	30.06	23.45	444	0.09
10	7.82	29.941	6.10	23.36	30	7.83	30.13	23.50	440	0.14
20	7.83	30.065	6.03	23.45	50	7.82	30.17	23.54	437	0.22
39	7.82	30.130	6.07	23.51	75	7.85	30.27	23.61	430	0.33
59	7.83	30.209	5.98	23.57	100	7.86	30.35	23.67	424	0.44
79	7.86	30.279	5.93	23.62	125	7.87	30.38	23.70	422	0.55
98	7.86	30.347	5.90	23.67						
123	7.87	30.380	5.90	23.69						
142	7.87	30.417	5.86	23.72						
8	CNAV OSHAWA; April 1, 1959; 1724 GCT; 48°41'N, 122°47.5'W; sounding, 58 fm; wind, 090°, 5 kt; weather, moderate rain showers; sea, calm.									
0	8.20	30.004	6.15	23.35	0	8.20	30.00	23.35	454	0.00
2	7.82	30.112	6.12	23.49	10	7.83	30.11	23.49	441	0.04
6	7.84	30.111	6.13	23.49	20	7.84	30.12	23.49	440	0.09
10	7.83	30.114	6.10	23.49	30	7.84	30.13	23.50	440	0.13
20	7.84	30.120	6.06	23.49	50	7.84	30.15	23.52	438	0.22
40	7.84	30.140	6.07	23.51	75	7.85	30.19	23.55	436	0.33
60	7.84	30.172	6.06	23.54	100	7.84	30.21	23.57	434	0.44
80	7.85	30.195	6.01	23.55						
99	7.84	30.210	5.99	23.57						
100	(7.84)a)	(30.211)a)	-	(23.57)						
9	CNAV OSHAWA; April 1, 1959; 1809 GCT; 48°42.5'N, 122°44'W; sounding, 35 fm; wind, 140°, 2 kt; weather, moderate rain showers; sea, calm.									
0	7.90	30.060	6.29	23.44	0	7.90	30.06	23.44	445	0.00
2	7.86	30.034	6.20	23.42	10	7.82	30.08	23.46	443	0.04
6	7.84	30.074	6.10	23.46	20	7.82	30.08	23.47	443	0.09
10	7.82	30.076	6.18	23.46	30	7.82	30.09	23.47	442	0.13
20	7.82	30.082	6.18	23.47	50	7.82	30.11	23.49	441	0.22
40	7.82	30.102	6.13	23.48						
63	7.82	30.120	6.16	23.50						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 1, 1959; 2236 GCT; 48°16.5'N, 123°31.5'W; sounding, 114 fm; wind, 270°, 40 kt; weather, overcast; sea, slight.										10
0	8.30	31.020	6.07	24.13	0	8.30	31.02	24.13	379	0.00
2	8.09	31.024	5.97	24.17	10	8.08	31.02	24.17	376	0.04
6	8.11	31.026	6.03	24.17	20	8.08	31.03	24.17	376	0.08
10	8.08	31.023	5.91	24.17	30	8.07	31.03	24.18	375	0.11
20	8.08	31.026	5.94	24.17	50	8.03	31.11	24.24	369	0.19
40	8.06	31.047	5.91	24.19	75	7.99	31.27	24.37	358	0.28
60	8.00	31.216	5.64	24.33	100	7.98	31.48	24.54	342	0.37
80	8.00	31.267	5.62	24.37	125	7.99	31.59	24.63	334	0.45
100	7.98	31.476	5.47	24.54	150	7.98	31.73	24.73	324	0.54
125	7.99	31.592	5.34	24.63	175	7.98	31.88	24.85	313	0.62
150	7.98	31.730	5.22	24.73	200	7.98	32.04	24.98	301	0.69
200	7.98	32.044	4.97	24.98						
CNAV OSHAWA; April 1, 1959; 2349 GCT; 48°13.5'N, 123°32'W; sounding, 72 fm; wind, 270°, 40 kt; weather, overcast; sea, slight.										11
0	8.50	29.708	6.84	23.08	0	8.50	29.71	23.08	480	0.00
2	8.37	29.891	6.78	23.24	10	8.37	29.90	23.25	464	0.05
5	8.40	29.896	6.65	23.24	20	8.33	29.97	23.31	458	0.09
9	8.38	29.900	6.67	23.25	30	8.29	30.16	23.47	443	0.14
17	8.34	29.934	6.63	23.28	50	8.14	30.82	24.00	392	0.22
35	8.28	30.309	6.41	23.58	75	8.03	31.15	24.28	366	0.32
52	8.12	30.905	5.95	24.07	100	7.98	31.53	24.58	338	0.41
69	8.05	31.081	5.82	24.22						
87	8.00	31.318	5.54	24.41						
108	7.98	31.682	5.30	24.70						
CNAV OSHAWA; April 2, 1959; 0045 GCT; 48°10.5'N, 123°32.5'W; sounding, 14 fm; wind, 270°, 30 kt; weather, cloudy; sea, slight.										12
0	8.60	28.592	7.30	22.20	0	8.60	28.59	22.20	564	0.00
2	8.63	28.592	7.29	22.19	10	8.61	28.60	22.20	564	0.06
6	8.62	28.596	7.36	22.20	20	8.60	28.61	22.21	563	0.11
10	8.61	28.596	7.28	22.20						
20	8.60	28.610	7.27	22.21						
CNAV OSHAWA; April 2, 1959; 0322 GCT; 48°23'N, 123°59'W; sounding, 50 fm; wind, 270°, 10 kt; weather, cloudy; sea, slight.										13
0	8.00	30.411	6.40	23.70	0	8.00	30.41	23.70	420	0.00
2	8.10	30.473	6.40	23.73	10	8.07	30.85	24.04	389	0.04
6	8.10	30.481	6.43	23.74	20	8.06	31.16	24.28	366	0.08
9	8.08	30.775	6.24	23.97	30	8.03	31.30	24.39	355	0.12
19	8.06	31.134	5.92	24.26	50	7.99	31.43	24.50	345	0.18
37	8.01	31.273	5.76	24.37	75	7.98	31.74	24.74	322	0.27
56	7.98	31.522	5.41	24.57						
74	7.98	31.736	5.27	24.74						
83	7.98	31.747	5.35	24.75						
CNAV OSHAWA; April 2, 1959; 0439 GCT; 48°18'N, 124°01.5'W; sounding, 100 fm; wind, 270°, 10 kt; weather, moderate hail showers; sea, slight.										14
0	8.30	30.040	6.84	23.37	0	8.30	30.04	23.37	452	0.00
2	8.24	30.032	6.83	23.37	10	8.26	30.03	23.37	453	0.04
6	8.28	30.032	6.80	23.36	20	8.06	30.70	23.92	400	0.09
10	8.26	30.030	6.85	23.37	30	7.97	31.18	24.31	363	0.13
20	8.06	30.701	6.37	23.92	50	7.96	31.66	24.68	328	0.20
39	7.97	31.451	5.66	24.52	75	8.00	32.02	24.96	301	0.28
59	7.98	31.708	5.38	24.72	100	8.02	32.45	25.29	270	0.35
79	8.01	32.117	4.93	25.03	125	8.00	32.76	25.54	247	0.41
99	8.02	32.434	4.73	25.28	150	7.80	33.40	26.07	198	0.47
124	8.00	32.742	4.43	25.52	175	7.76	33.49	26.15	190	0.52
148	7.81	33.367	3.62	26.04						
178	7.76	33.469	3.40	26.13						

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
15	CNAV OSHAWA; April 2, 1959; 1043 GCT; 48°42'N, 125°05.5'W; sounding, 20 fm; wind, 270°, 5 kt; weather, cloudy; sea, calm.									
0	8.70	30.028	7.20	23.30	0	8.70	30.03	23.30	459	0.00
2	8.76	30.194	7.06	23.42	10	8.86	30.49	23.64	427	0.04
6	8.85	30.453	6.86	23.61	20	8.82	30.65	23.77	414	0.09
10	8.86	30.487	6.81	23.64	30	8.76	30.90	23.97	395	0.13
20	8.82	30.652	6.79	23.77						
30	8.76	30.902	6.67	23.97						
16	CNAV OSHAWA; April 2, 1959; 1139 GCT; 48°36.5'N, 125°06'W; sounding, 50 fm; wind, 090°, 10 kt; weather, cloudy; sea, calm.									
0	8.80	28.501	7.18	22.10	0	8.80	28.50	22.10	574	0.00
2	8.88	28.348	7.19	21.96	10	9.02	30.48	23.61	430	0.05
6	9.00	30.108	7.09	23.32	20	8.51	31.63	24.58	337	0.09
10	9.02	30.480	6.98	23.61	30	8.21	32.13	25.02	296	0.12
20	8.51	31.626	6.13	24.58	50	8.25	32.14	25.02	296	0.18
40	8.12	32.002	5.15	24.93	75	8.40	32.41	25.20	279	0.25
60	8.60	32.254	5.69	25.05						
85	8.01	32.491	4.45	25.33						
17	CNAV OSHAWA; April 2, 1959; 1306 GCT; 48°29'N, 125°07'W; sounding, 72 fm; wind, 140°, 10 kt; weather, clear; sea, slight.									
0	8.30	29.654	7.14	23.07	0	8.30	29.65	23.07	481	0.00
2	8.55	30.301	7.06	23.54	10	8.73	31.43	24.39	355	0.04
6	8.68	31.365	6.74	24.35	20	8.79	31.83	24.70	326	0.08
10	8.73	31.434	6.75	24.39	30	8.82	32.01	24.83	313	0.11
20	8.79	31.833	6.81	24.70	50	8.93	32.10	24.88	309	0.17
40	8.82	31.964	6.66	24.79	75	9.08	32.50	25.17	282	0.24
60	9.10	32.276	6.08	24.99	100	8.68	32.97	25.60	241	0.31
80	9.03	32.566	5.41	25.23	125	8.21	33.21	25.86	217	0.37
100	8.68	32.969	4.56	25.60						
125	8.21	33.213	4.08	25.86						
18	CNAV OSHAWA; April 2, 1959; 1652 GCT; 48°24'N, 124°52.5'W; sounding, 150 fm; wind, 090°, 3 kt; weather, partly cloudy; sea, calm.									
0	9.30	28.425	7.00	21.96	0	9.30	28.42	21.96	587	0.00
2	9.10	28.440	6.94	22.00	10	9.23	29.81	23.05	483	0.05
6	9.26	29.504	6.78	22.81	20	9.26	29.93	23.14	474	0.10
10	9.23	29.809	6.82	23.05	30	9.18	30.49	23.59	431	0.15
20	9.26	29.933	6.75	23.14	50	8.96	31.73	24.59	336	0.22
40	8.99	31.489	6.81	24.40	75	8.88	31.83	24.68	329	0.31
59	8.99	31.646	6.75	24.52	100	8.17	32.27	25.13	286	0.38
79	8.84	31.879	6.71	24.72	125	7.92	33.27	25.95	208	0.45
99	8.19	32.244	5.02	25.11	150	7.78	33.46	26.12	192	0.50
124	7.93	33.250	3.68	25.93	175	7.52	33.57	26.25	181	0.54
149	7.79	33.458	3.32	26.12	200	7.17	33.60	26.32	174	0.59
198	7.18	33.594	3.16	26.31	250	7.06	33.79	26.48	160	0.67
267	7.14	33.866	2.62	26.53						
19	CNAV OSHAWA; April 2, 1959; 1954 GCT; 47°54.5'N, 125°03.5'W; sounding, 70 fm; wind, 270°, 2 kt; weather, cloudy; sea, calm.									
0	9.70	32.326	6.72	24.94	0	9.70	32.33	24.94	303	0.00
2	9.46	32.329	6.78	24.98	10	9.26	32.33	25.01	296	0.03
6	9.32	32.326	6.88	25.00	20	9.29	32.37	25.04	293	0.06
10	9.26	32.325	6.88	25.01	30	9.27	32.39	25.05	292	0.09
20	9.29	32.371	6.85	25.04	50	9.20	32.41	25.08	290	0.15
39	9.20	32.375	6.62	25.06	75	9.08	33.08	25.62	239	0.21
59	9.24	32.453	6.49	25.11	100	8.91	33.43	25.92	211	0.27
79	9.02	33.310	3.90	25.81	125	8.47	33.64	26.15	189	0.32
98	8.93	33.413	3.71	25.91						
123	8.52	33.617	3.14	26.13						
125	(8.47)a)	(33.637)a)	-	(26.15)						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 2, 1959; 2344 GCT; 47°31'N, 124°33'W; sounding, 21 fm; wind, 360°, 10 kt; weather, partly cloudy; sea, calm.										20
0	10.10	26.431	7.44	20.29	0	10.10	26.43	20.29	747	0.00
2	9.51	26.898	7.26	20.74	10	9.62	29.77	22.96	491	0.06
6	9.54	28.347	6.98	21.87	20	9.38	31.24	24.15	378	0.11
10	9.62	29.774	6.96	22.96	30	9.36	31.34	24.22	371	0.14
20	9.38	31.243	6.56	24.15						
30	9.36	31.336	6.68	24.22						
CNAV OSHAWA; April 3, 1959; 0313 GCT; 47°05.5'N, 124°50'W; sounding, 77 fm; wind, 320°, 10 kt; weather, partly cloudy; sea, slight.										21
0	9.40	32.112	7.16	24.82	0	9.40	32.11	24.82	314	0.00
2	9.48	32.086	6.99	24.79	10	9.32	32.25	24.94	303	0.03
6	9.48	32.098	6.98	24.80	20	9.40	32.37	25.02	295	0.06
10	9.32	32.250	6.91	24.94	30	9.39	32.42	25.06	291	0.09
20	9.40	32.372	6.72	25.02	50	9.29	32.41	25.07	291	0.15
40	9.29	32.402	6.73	25.06	75	9.30	32.70	25.29	270	0.22
60	9.34	32.417	6.75	25.07	100	8.88	33.33	25.85	218	0.28
80	9.27	32.845	5.51	25.41	125	8.49	33.67	26.18	187	0.33
100	8.88	33.326	3.85	25.85						
135	8.36	33.733	3.12	26.25						
CNAV OSHAWA; April 3, 1959; 0721 GCT; 46°40'N, 124°15'W; sounding, 25 fm; wind, 040°, 2 kt; weather, clear; sea, calm.										22
0	10.00	27.099	7.14	20.83	0	10.00	27.10	20.83	696	0.00
2	9.78	27.238	7.05	20.97	10	9.82	31.46	24.24	369	0.05
6	9.90	30.206	6.78	23.26	20	9.81	31.59	24.35	359	0.09
10	9.82	31.458	6.69	24.24	30	9.78	31.71	24.45	350	0.13
20	9.81	31.591	6.72	24.35						
44	9.70	31.858	6.71	24.57						
CNAV OSHAWA; April 4, 1959; 2334 GCT; 46°14.5'N, 124°13.5'W; sounding, 34 fm; wind, 270°, 10 kt; weather, partly cloudy; sea, calm.										23
0	10.50	18.729	7.58	14.27	0	10.50	18.73	14.27	1329	0.00
2	10.40	18.670	7.59	14.23	10	10.13	27.53	21.14	665	0.10
6	10.61	19.796	7.64	15.08	20	9.90	29.99	23.08	480	0.16
10	10.13	27.532	7.36	21.14	30	9.80	31.34	24.15	378	0.20
20	9.90	29.986	7.30	23.08	50	9.81	31.98	24.65	331	0.27
39	9.83	31.609	6.64	24.36						
54	9.80	32.009	6.66	24.67						
CNAV OSHAWA; April 5, 1959; 0137 GCT; 46°14'N, 124°40.5'W; sounding, 470 fm; wind, 270°, 2 kt; weather, partly cloudy; sea, calm.										24
0	11.20	27.260	7.14	20.76	0	11.20	27.26	20.76	702	0.00
10	10.09	32.342	6.84	24.89	10	10.09	32.34	24.89	308	0.05
20	10.07	32.476	6.76	24.99	20	10.07	32.48	24.99	298	0.08
30	10.06	32.476	6.70	25.00	30	10.06	32.48	25.00	298	0.11
50	10.00	32.497	6.64	25.02	50	10.00	32.50	25.02	296	0.17
75	9.59	32.967	5.26	25.45	75	9.59	32.97	25.45	255	0.24
100	8.83	33.563	3.50	26.04	100	8.83	33.56	26.04	200	0.30
125	8.44	33.688	3.11	26.20	125	8.44	33.69	26.20	185	0.34
150	8.18	33.752	2.79	26.29	150	8.18	33.75	26.29	177	0.39
175	8.08	33.766	2.81	26.31	175	8.08	33.77	26.31	175	0.44
200	7.85	33.848	3.06	26.41	200	7.85	33.85	26.41	166	0.48
250	6.48	34.015	2.15	26.73	250	6.48	34.02	26.73	135	0.55
299	6.14	34.052	1.65	26.81	300	6.13	34.05	26.81	129	0.62
358	5.64	34.089	2.71	26.90	400	5.45	34.11	26.94	117	0.74
451	5.40	34.119	1.86	26.95	500	5.18	34.15	27.01	112	0.86
595	4.58	34.258	1.02	27.16	600	4.54	34.26	27.17	97	0.97
600	(4.54)a)	(34.265)a)	-	(27.17)						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
25	CNAV OSHAWA; April 5, 1959; 0616 GCT; 46°14'N, 125°09'W; sounding, 780 fm; wind, 270°, 2 kt; weather, partly cloudy; sea, calm.									
0	10.70	32.436	6.68	24.86	0	10.70	32.44	24.86	310	0.00
10	9.96	32.403	6.75	24.95	10	9.96	32.40	24.95	301	0.03
20	9.96	32.417	6.68	24.97	20	9.96	32.42	24.97	300	0.06
30	9.94	32.433	6.81	24.98	30	9.94	32.43	24.98	299	0.09
50	9.98	32.474	6.65	25.01	50	9.98	32.47	25.01	297	0.15
75	9.99	32.542	6.40	25.06	75	9.99	32.54	25.06	293	0.22
100	8.90	33.249	4.85	25.79	100	8.90	33.25	25.79	224	0.29
125	8.30	33.478	4.36	26.06	125	8.30	33.48	26.06	198	0.34
150	8.02	33.714	3.72	26.28	150	8.02	33.71	26.28	177	0.39
175	7.85	33.844	-	26.41	175	7.85	33.84	26.41	166	0.43
200	7.46	33.870	-	26.49	200	7.46	33.87	26.49	159	0.48
250	6.60	33.914	-	26.64	250	6.60	33.91	26.64	144	0.55
300	6.12	33.948	-	26.73	300	6.12	33.95	26.73	136	0.62
400	5.82	34.069	1.63	26.86	400	5.82	34.07	26.86	125	0.75
500	5.24	34.127	1.14	26.98	500	5.24	34.13	26.98	114	0.87
600	4.73	34.193	0.68	27.09	600	4.73	34.19	27.09	105	0.98
800	4.02	34.306	0.45	27.25	700	4.32	34.25	27.18	96	1.09
1000	3.46	34.416	0.44	27.40	800	4.02	34.31	27.25	90	1.18
1200	3.02	34.476	0.62	27.49	1000	3.46	34.42	27.40	77	1.35
1400	2.58	34.561	1.03	27.59	1200	3.02	34.48	27.49	69	1.50
26	CNAV OSHAWA; April 5, 1959; 1309 GCT; 46°14'N, 126°12'W; sounding, 1350 fm; wind, 200°, 20 kt; weather, intermittent slight rain; sea, moderate.									
0	9.80	32.353	6.90	24.94	0	9.80	32.35	24.94	302	0.00
10	9.70	32.349	6.90	24.96	10	9.70	32.35	24.96	301	0.03
20	9.68	32.345	6.91	24.96	20	9.68	32.34	24.96	301	0.06
30	9.47	32.351	6.88	24.99	30	9.47	32.35	24.99	298	0.09
50	9.29	32.351	6.50	25.02	50	9.29	32.35	25.02	295	0.15
75	8.98	32.839	5.60	25.45	75	8.98	32.84	25.45	255	0.22
100	8.96	33.479	3.96	25.96	100	8.96	33.48	25.96	208	0.28
125	8.45	33.704	3.30	26.21	125	8.45	33.70	26.21	184	0.33
150	7.91	33.846	3.02	26.40	150	7.91	33.85	26.40	166	0.37
175	7.53	33.936	2.71	26.53	175	7.53	33.94	26.53	154	0.41
200	7.30	33.964	2.63	26.58	200	7.30	33.96	26.58	149	0.45
250	6.94	33.996	2.44	26.66	250	6.94	34.00	26.66	143	0.52
300	6.35	34.023	1.89	26.76	300	6.35	34.02	26.76	134	0.59
348	5.91	34.052	2.49	26.84	400	5.55	34.08	26.91	120	0.72
437	5.36	34.102	0.96	26.94	500	5.09	34.14	27.01	112	0.84
526	5.00	34.158	0.72	27.03	600	4.71	34.21	27.10	103	0.95
707	4.30	34.276	0.52	27.20	700	4.33	34.27	27.19	95	1.05
891	3.76	34.382	0.40	27.34	800	4.01	34.33	27.28	88	1.14
1366	2.74	34.516	0.78	27.54	1000	3.48	34.43	27.41	76	1.30
1857	2.06	34.586	1.55	27.66	1200	3.04	34.49	27.50	68	1.45
2252	1.78	34.627	1.86	27.71	1500	2.52	34.54	27.58	60	1.64
					2000	1.93	34.60	27.68	51	1.92

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 5, 1959; 2320 GCT; 46°17'N, 127°43'W; sounding, 1400 fm; wind, 300°, 30 kt; weather, partly cloudy; sea, moderate.										27
0	9.50	32.456	6.98	25.07	0	9.50	32.46	25.07	290	0.00
10	9.36	32.416	6.92	25.06	10	9.36	32.42	25.06	291	0.03
20	9.38	32.432	6.89	25.07	20	9.38	32.43	25.07	290	0.06
30	9.37	32.418	6.96	25.06	30	9.37	32.42	25.06	291	0.09
50	9.22	32.421	6.82	25.09	50	9.22	32.42	25.09	289	0.15
75	8.48	32.498	6.95	25.26	75	8.48	32.50	25.26	273	0.22
100	7.70	33.184	5.02	25.91	100	7.70	33.18	25.91	211	0.28
125	7.68	33.488	4.23	26.16	125	7.68	33.49	26.16	189	0.33
150	7.48	33.766	3.62	26.40	150	7.48	33.77	26.40	166	0.37
175	7.24	33.855	3.19	26.51	175	7.24	33.86	26.51	156	0.41
200	6.87	33.913	3.26	26.60	200	6.87	33.91	26.60	147	0.45
250	6.17	33.956	2.70	26.73	250	6.17	33.96	26.73	136	0.52
300	5.86	34.001	1.89	26.80	300	5.86	34.00	26.80	129	0.59
370	5.62	34.060	1.53	26.88	400	5.42	34.07	26.91	120	0.72
465	4.80	34.074	1.32	26.99	500	4.58	34.09	27.03	109	0.83
557	4.31	34.143	0.65	27.09	600	4.16	34.18	27.14	99	0.94
755	4.01	34.303	0.30	27.25	700	3.99	34.26	27.22	92	1.03
950	3.39	34.392	0.38	27.39	800	3.90	34.33	27.29	86	1.12
1147	3.03	34.459	0.45	27.47	1000	3.27	34.41	27.41	75	1.29
1446	2.52	34.526	0.71	27.57	1200	2.94	34.47	27.49	68	1.43
1500	(2.43)a)	(34.534)a)	-	(27.58)	1500	2.43	34.53	27.58	59	1.62
CNAV OSHAWA; April 6, 1959; 0816 GCT; 46°13'N, 129°13'W; sounding, 1350 fm; wind, 300°, 20 kt; weather, partly cloudy; sea, moderate.										28
0	8.40	32.527	7.07	25.30	0	8.40	32.53	25.30	268	0.00
10	8.48	32.491	6.97	25.26	10	8.48	32.49	25.26	272	0.03
20	8.50	32.491	6.99	25.25	20	8.50	32.49	25.25	273	0.06
30	8.49	32.486	7.02	25.25	30	8.49	32.49	25.25	273	0.08
49	8.49	32.486	6.99	25.25	50	8.49	32.49	25.25	273	0.14
74	8.33	32.512	6.87	25.30	75	8.31	32.52	25.31	269	0.20
99	7.56	32.929	5.85	25.73	100	7.54	32.95	25.75	227	0.27
123	7.10	33.376	5.29	26.15	125	7.07	33.40	26.17	187	0.32
148	6.84	33.603	5.15	26.36	150	6.82	33.61	26.37	168	0.36
173	6.71	33.673	4.26	26.43	175	6.69	33.68	26.44	162	0.41
197	6.45	33.809	4.52	26.58	200	6.42	33.82	26.59	148	0.44
247	5.96	33.881	3.30	26.70	250	5.94	33.89	26.70	138	0.52
296	5.72	33.956	2.51	26.78	300	5.70	33.96	26.79	130	0.58
365	5.25	33.996	1.61	26.87	400	5.07	34.02	26.91	119	0.71
457	4.85	34.072	1.31	26.98	500	4.65	34.11	27.03	109	0.83
550	4.42	34.142	0.71	27.08	600	4.25	34.18	27.13	100	0.93
739	4.00	34.291	0.69	27.24	700	4.04	34.26	27.22	92	1.03
928	3.47	34.372	0.64	27.36	800	3.84	34.32	27.29	86	1.12
1121	3.02	34.458	1.00	27.47	1000	3.29	34.40	27.40	76	1.28

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
29	CNAV OSHAWA; April 6, 1959; 1929 GCT; 47°03'N, 128°07.5'W; sounding, missing; wind, 020°, 15 kt; weather, cloudy; sea, slight.									
0	8.80	32.526	6.92	25.24	0	8.80	32.53	25.24	274	0.00
9	8.90	32.471	6.90	25.18	10	8.90	32.47	25.17	280	0.03
19	8.88	32.468	6.95	25.18	20	8.88	32.47	25.18	280	0.06
28	8.86	32.474	6.95	25.19	30	8.86	32.47	25.19	279	0.08
46	8.84	32.469	7.03	25.19	50	8.84	32.47	25.18	280	0.14
69	8.86	32.469	7.05	25.18	75	8.77	32.52	25.24	275	0.21
93	8.26	32.822	5.93	25.55	100	8.04	32.94	25.67	234	0.27
116	7.48	33.229	5.23	25.98	125	7.24	33.33	26.09	194	0.33
139	6.93	33.428	5.09	26.21	150	6.80	33.53	26.31	174	0.38
162	6.75	33.654	4.71	26.41	175	6.71	33.76	26.50	156	0.42
185	6.72	33.828	3.90	26.56	200	6.59	33.90	26.63	145	0.45
231	6.04	33.918	3.20	26.71	250	5.84	33.94	26.76	133	0.52
279	5.64	33.968	3.06	26.80	300	5.47	33.98	26.83	126	0.59
348	5.11	33.985	1.88	26.88	400	4.81	34.02	26.94	116	0.71
434	4.66	34.052	1.21	26.98	500	4.55	34.12	27.05	107	0.82
527	4.56	34.144	1.42	27.07	600	4.40	34.21	27.13	100	0.93
715	4.02	34.282	0.45	27.24	700	4.08	34.27	27.22	92	1.03
906	3.48	34.375	0.72	27.36	800	3.78	34.33	27.30	85	1.12
30	CNAV OSHAWA; April 7, 1959; 0200 GCT; 47°45.5'N, 127°12'W; sounding, missing; wind, 360°, 15 kt; weather, clear; sea, moderate.									
0	8.80	32.469	6.92	25.19	0	8.80	32.47	25.19	278	0.00
10	9.00	32.419	6.96	25.12	10	9.00	32.42	25.12	285	0.03
20	9.03	32.416	6.88	25.11	20	9.03	32.42	25.11	286	0.06
30	8.98	32.418	6.92	25.12	30	8.98	32.42	25.12	285	0.09
50	8.94	32.420	6.87	25.13	50	8.94	32.42	25.13	285	0.14
75	8.67	32.687	6.03	25.38	75	8.67	32.69	25.38	262	0.21
100	8.18	33.362	4.39	25.98	100	8.18	33.36	25.98	205	0.27
125	7.91	33.621	3.79	26.23	125	7.91	33.62	26.23	182	0.32
150	7.60	33.773	3.41	26.39	150	7.60	33.77	26.39	167	0.36
175	7.31	33.850	3.20	26.49	175	7.31	33.85	26.49	158	0.40
200	7.20	33.939	2.69	26.58	200	7.20	33.94	26.58	150	0.44
250	6.62	33.963	2.57	26.68	250	6.62	33.96	26.68	141	0.52
300	6.28	34.001	2.06	26.75	300	6.28	34.00	26.75	134	0.59
400	5.60	34.056	1.56	26.88	400	5.60	34.06	26.88	123	0.72
500	5.07	34.121	0.90	26.99	500	5.07	34.12	26.99	113	0.84
31	CNAV OSHAWA; April 9, 1959; 0249 GCT; 48°54'N, 125°34.5'W; sounding, 50 fm; wind, 140°, 5 kt; weather, clear; sea, slight.									
0	9.40	28.527	8.59	22.03	0	9.40	28.53	22.03	580	0.00
2	9.21	(28.522)a)	8.64	(22.05)	10	8.98	29.12	22.55	530	0.06
6	9.28	28.698	8.48	22.18	20	8.44	30.58	23.77	414	0.10
10	8.98	29.120	8.26	22.55	30	8.36	31.36	24.39	355	0.14
19	8.47	30.460	7.30	23.67	50	8.76	31.82	24.69	327	0.21
38	8.64	31.497	6.48	24.46	75	8.89	32.11	24.90	307	0.29
56	8.82	31.883	6.24	24.73						
82	8.88	32.152	6.29	24.93						
32	CNAV OSHAWA; April 9, 1959; 0441 GCT; 48°44'N, 125°48'W; sounding, 54 fm; wind, 120°, 5 kt; weather, clear; sea, calm.									
0	9.50	29.663	8.00	22.90	0	9.50	29.66	22.90	497	0.00
2	9.26	29.656	8.23	22.93	10	9.29	29.65	22.92	495	0.05
6	9.30	29.652	8.16	22.92	20	8.93	31.30	24.26	368	0.09
10	9.29	29.653	8.15	22.92	30	8.80	32.01	24.83	313	0.13
19	8.96	31.174	6.86	24.16	50	8.75	32.09	24.90	307	0.19
38	8.84	31.909	6.57	24.75	75	8.94	32.37	25.10	289	0.26
58	8.68	32.087	6.04	24.91						
77	9.00	32.417	5.56	25.12						
86	8.95	32.440	5.50	25.15						

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

33

CNAV OSHAWA; April 9, 1959; 0609 GCT; 48°35.5'N, 126°02'W; sounding, 60 fm; wind, 120°, 10 kt; weather, clear; sea, slight.

0	9.40	30.066	8.00	23.23	0	9.40	30.07	23.23	466	0.00
2	9.20	30.068	8.00	23.26	10	9.22	30.11	23.29	460	0.05
6	9.19	30.065	8.02	23.26	20	8.75	31.88	24.74	322	0.09
10	9.22	30.114	7.96	23.29	30	8.73	32.48	25.21	277	0.12
19	8.78	31.752	6.52	24.63	50	9.07	32.30	25.02	296	0.17
38	9.02	32.135	6.72	24.90	75	8.87	32.43	25.15	284	0.25
58	9.06	32.374	6.62	25.08	100	9.03	32.87	25.47	254	0.31
77	8.84	32.430	6.52	25.15						
96	8.96	32.761	6.25	25.39						
100	(9.03)a)	(32.866)a)	-	(25.47)						

34

CNAV OSHAWA; April 9, 1959; 0758 GCT; 48°28'N, 126°15'W; sounding, 330 fm; wind, 120°, 15 kt; weather, clear; sea, slight.

0	9.20	31.168	8.27	24.11	0	9.20	31.17	24.11	381	0.00
10	9.02	31.175	8.33	24.15	10	9.02	31.17	24.15	378	0.04
19	9.01	31.244	7.90	24.20	20	9.01	31.31	24.25	368	0.08
29	8.99	32.346	6.66	25.07	30	8.99	32.42	25.12	286	0.11
48	8.90	32.419	6.80	25.14	50	8.89	32.42	25.14	284	0.17
72	8.86	32.451	6.68	25.17	75	8.84	32.52	25.23	276	0.24
95	8.66	33.384	4.15	25.93	100	8.61	33.49	26.02	201	0.30
119	8.38	33.617	3.57	26.15	125	8.30	33.66	26.20	185	0.34
143	8.04	33.769	3.07	26.32	150	7.97	33.80	26.36	170	0.39
167	7.84	33.843	2.79	26.41	175	7.75	33.86	26.44	163	0.43
191	7.54	33.900	2.75	26.50	200	7.42	33.92	26.53	155	0.47
238	6.90	33.957	2.46	26.63	250	6.77	33.97	26.66	143	0.55
286	6.44	33.986	2.03	26.72	300	6.32	33.99	26.74	136	0.62
384	5.72	34.020	1.58	26.84	400	5.61	34.03	26.86	125	0.75
510	4.98	34.119	1.37	27.00	500	5.03	34.11	26.99	113	0.87

35

CNAV OSHAWA; April 9, 1959; 1209 GCT; 49°03'N, 126°49'W; sounding, 124 fm; wind, 140°, 10 kt; weather, clear; sea, slight.

0	8.80	32.456	7.04	25.18	0	8.80	32.46	25.18	279	0.00
10	8.70	32.438	7.06	25.18	10	8.70	32.44	25.18	280	0.03
20	8.32	32.424	7.08	25.23	20	8.32	32.42	25.23	275	0.06
30	8.22	32.430	7.04	25.25	30	8.22	32.43	25.25	274	0.08
49	8.19	32.429	7.03	25.25	50	8.18	32.44	25.26	273	0.14
74	7.86	32.881	5.79	25.65	75	7.86	32.90	25.67	234	0.20
98	8.20	33.374	4.36	25.99	100	8.21	33.40	26.01	202	0.26
122	8.06	33.610	3.68	26.20	125	8.03	33.64	26.22	183	0.31
147	7.66	33.817	2.31	26.42	150	7.62	33.83	26.43	163	0.35
171	7.45	33.864	2.76	26.48	175	7.41	33.87	26.50	157	0.39
210	6.94	33.946	2.48	26.62	200	7.09	33.92	26.58	150	0.43

36

CNAV OSHAWA; April 9, 1959; 1908 GCT; 50°06'N, 127°58'W; sounding, 40 fm; wind, calm; weather, partly cloudy; sea, calm.

0	10.20	30.377	7.88	23.34	0	10.20	30.38	23.34	455	0.00
2	9.34	30.374	8.04	23.47	10	8.48	30.99	24.08	384	0.04
6	9.25	30.377	8.03	23.49	20	8.54	31.42	24.41	353	0.08
10	8.48	30.988	7.39	24.08	30	8.57	31.65	24.58	337	0.11
20	8.54	31.422	6.88	24.41	50	8.49	31.88	24.78	318	0.18
40	8.57	31.666	6.70	24.60						
70	8.14	32.514	6.39	25.33						

a) Value extrapolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
37	CNAV OSHAWA; April 9, 1959; 2019 GCT; 50°03'N, 128°03'W; sounding, 275 fm; wind, 140°, 5 kt; weather, partly cloudy; sea, calm.									
0	9.40	32.137	7.12	24.84	0	9.40	32.14	24.84	312	0.00
10	8.75	32.248	7.18	25.03	10	8.75	32.25	25.03	294	0.03
20	8.34	32.318	7.14	25.14	20	8.34	32.32	25.14	283	0.06
30	8.16	32.407	7.08	25.24	30	8.16	32.41	25.24	274	0.09
49	8.14	32.415	6.96	25.25	50	8.14	32.42	25.25	274	0.14
74	8.12	32.413	7.05	25.25	75	8.12	32.41	25.25	274	0.21
99	8.10	32.421	7.00	25.26	100	8.10	32.42	25.26	274	0.28
123	8.13	32.420	6.87	25.25	125	8.12	32.45	25.28	272	0.35
148	7.94	33.177	4.69	25.87	150	7.90	33.22	25.91	212	0.41
173	7.28	33.456	3.99	26.19	175	7.25	33.47	26.20	185	0.46
197	7.22	33.590	4.13	26.30	200	7.20	33.61	26.32	174	0.50
247	6.36	33.875	3.66	26.64	250	6.32	33.88	26.65	143	0.58
296	5.78	33.920	2.86	26.75	300	5.74	33.92	26.76	133	0.66
444	4.90	34.072	1.13	26.97	400	5.02	34.02	26.92	118	0.78
38	CNAV OSHAWA; April 9, 1959; 2158 GCT; 49°54'N, 128°14.5'W; sounding, 750 fm; wind, 090°, 10 kt; weather, partly cloudy; sea, calm.									
0	9.90	32.496	7.06	25.04	0	9.90	32.50	25.04	293	0.00
10	8.42	32.460	7.21	25.24	10	8.42	32.46	25.24	274	0.03
20	8.20	32.459	7.06	25.27	20	8.20	32.46	25.27	271	0.06
30	8.05	32.468	6.99	25.30	30	8.05	32.47	25.30	268	0.08
50	7.93	32.525	6.70	25.36	50	7.93	32.53	25.36	263	0.14
75	7.37	33.231	5.08	26.00	75	7.37	33.23	26.00	203	0.20
100	7.02	33.485	4.70	26.25	100	7.02	33.48	26.25	180	0.24
125	7.28	33.744	3.54	26.41	125	7.28	33.74	26.41	164	0.29
150	7.38	33.914	3.09	26.53	150	7.38	33.91	26.53	153	0.33
175	7.22	33.850	2.81	26.50	175	7.22	33.85	26.50	156	0.37
200	7.00	33.950	2.53	26.61	200	7.00	33.95	26.61	146	0.40
225	6.50	33.950	2.60	26.68	250	6.40	33.98	26.71	137	0.48
250	6.40	33.976	2.23	26.71	300	6.04	34.00	26.78	132	0.54
300	6.04	33.997	1.86	26.78	400	5.30	34.04	26.90	120	0.67
390	5.36	34.037	1.49	26.89	500	4.86	34.12	27.02	110	0.79
486	4.93	34.112	1.04	27.00	600	4.26	34.15	27.10	102	0.89
587	4.32	34.141	0.65	27.09	700	3.94	34.21	27.19	95	0.99
788	3.86	34.298	0.58	27.26	800	3.83	34.31	27.27	88	1.09
991	3.38	34.392	0.39	27.39	1000	3.36	34.40	27.39	77	1.25
1192	2.94	34.464	0.60	27.48	1200	2.92	34.47	27.49	68	1.40
1200	(2.92)a)	(34.466)a)	-	(27.49)						
39	CNAV OSHAWA;April 10, 1959; 0030 GCT; 49°44'N, 128°26'W; sounding, 800 fm; wind, 140°, 10 kt; weather, partly cloudy; sea, slight.									
0	9.00	32.484	7.16	25.17	0	9.00	32.48	25.17	280	0.00
10	8.48	32.452	7.24	25.23	10	8.48	32.45	25.23	275	0.03
20	8.15	32.459	7.05	25.28	20	8.15	32.46	25.28	270	0.06
30	8.14	32.468	7.00	25.29	30	8.14	32.47	25.29	270	0.08
50	8.10	32.471	6.98	25.30	50	8.10	32.47	25.30	269	0.14
74	7.86	32.876	5.84	25.65	75	7.86	32.90	25.67	234	0.20
99	7.94	33.448	4.22	26.09	100	7.93	33.46	26.10	194	0.25
124	7.54	33.664	3.75	26.31	125	7.53	33.67	26.32	173	0.30
149	7.64	33.860	2.82	26.45	150	7.64	33.86	26.46	161	0.34
173	7.47	33.912	2.80	26.52	175	7.45	33.92	26.52	155	0.38
198	7.24	33.941	2.64	26.57	200	7.22	33.94	26.58	150	0.42
247	6.62	33.979	2.25	26.69	250	6.59	33.98	26.69	139	0.49
297	6.30	33.998	1.87	26.74	300	6.28	34.00	26.75	135	0.56
395	5.34	34.024	1.47	26.88	400	5.31	34.03	26.89	122	0.69
494	4.96	34.107	0.84	26.99	500	4.94	34.11	27.00	112	0.81
594	4.63	34.152	0.93	27.07	600	4.61	34.16	27.07	106	0.92
795	4.02	34.292	0.47	27.24	700	4.30	34.22	27.15	99	1.02
995	3.50	34.385	0.64	27.37	800	4.01	34.29	27.25	90	1.12
1195	2.92	34.448	0.81	27.47	1000	3.49	34.39	27.37	79	1.29
1200	(2.90)a)	(34.449)a)	-	(27.48)	1200	2.90	34.45	27.48	69	1.44

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

40

CNAV OSHAWA; April 10, 1959; 0602 GCT; 49°07'N, 129°24'W; sounding, 1250 fm; wind, 140°, 5 kt; weather, clear; sea, calm.

0	8.00	32.585	7.01	25.40	0	8.00	32.58	25.40	258	0.00
10	7.86	32.554	7.05	25.40	10	7.86	32.55	25.40	259	0.03
20	7.74	32.551	7.04	25.41	20	7.74	32.55	25.41	258	0.05
30	7.71	32.552	7.04	25.42	30	7.71	32.55	25.42	257	0.08
49	7.66	32.551	7.03	25.42	50	7.66	32.55	25.42	257	0.13
74	7.60	32.552	7.04	25.43	75	7.59	32.56	25.44	256	0.19
98	7.34	32.916	6.02	25.75	100	7.31	32.95	25.78	224	0.26
123	6.81	33.356	5.14	26.17	125	6.77	33.38	26.20	184	0.31
148	6.42	33.602	4.85	26.42	150	6.40	33.62	26.43	163	0.35
172	6.28	33.724	4.36	26.53	175	6.26	33.74	26.54	152	0.39
197	6.15	33.826	3.94	26.63	200	6.13	33.83	26.64	144	0.43
246	5.66	33.880	3.20	26.73	250	5.62	33.88	26.74	134	0.50
295	5.27	33.937	2.34	26.82	300	5.23	33.94	26.83	126	0.56
389	4.66	34.009	1.39	26.95	400	4.62	34.02	26.96	114	0.68
487	4.50	34.082	0.83	27.03	500	4.47	34.09	27.04	108	0.80
586	4.25	34.168	0.58	27.12	600	4.22	34.18	27.13	100	0.90
785	3.80	34.289	0.37	27.26	700	3.98	34.25	27.21	93	1.00
985	3.37	34.378	0.36	27.38	800	3.77	34.30	27.27	88	1.09
1185	2.92	34.438	0.46	27.47	1000	3.34	34.38	27.38	78	1.26
1477	2.38	34.520	0.85	27.58	1200	2.89	34.44	27.47	70	1.40
1500	(2.34)a)	(34.526)a)	-	(27.59)	1500	2.34	34.53	27.59	59	1.60

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CNAV OSHAWA; April 10, 1959; 1306 GCT; 48°23'N, 130°23'W; sounding, 160 fm; wind, 270°, 15 kt; weather, overcast; sea, slight.

0	8.00	32.590	7.03	25.41	0	8.00	32.59	25.41	258	0.00
9	7.91	32.549	7.25	25.39	10	7.91	32.55	25.39	260	0.03
18	7.93	32.552	7.15	25.39	20	7.93	32.55	25.39	260	0.05
27	7.90	(32.553)b)	7.07	(25.39)	30	7.88	32.55	25.39	260	0.08
45	7.64	32.550	7.03	25.43	50	7.60	32.55	25.43	256	0.13
68	7.58	32.561	7.03	25.44	75	7.57	32.56	25.44	256	0.20
92	7.58	32.554	7.03	25.44	100	7.52	32.62	25.50	251	0.26
115	7.31	32.844	6.48	25.70	125	7.15	33.08	25.91	212	0.32
138	6.91	33.497	5.02	26.27	150	6.86	33.68	26.42	164	0.36
161	6.92	33.756	3.44	26.47	175	6.87	33.81	26.52	155	0.40
185	6.80	33.793	3.16	26.52	200	6.67	33.82	26.56	151	0.44
232	6.27	33.907	2.42	26.68	250	6.08	33.93	26.72	136	0.52
280	5.76	33.957	2.16	26.78	300	5.59	33.98	26.82	128	0.58
395	5.10	34.038	1.16	26.92	400	5.07	34.04	26.93	118	0.70
494	4.64	34.106	0.77	27.03	500	4.62	34.11	27.03	108	0.82
593	4.34	34.166	0.53	27.11	600	4.32	34.17	27.12	101	0.93
792	3.78	34.283	0.37	27.26	700	4.03	34.23	27.19	95	1.02
989	3.30	34.372	0.38	27.38	800	3.76	34.29	27.27	88	1.12
1188	2.92	34.443	0.53	27.47	1000	3.28	34.38	27.38	78	1.28
1486	2.42	34.519	0.76	27.57	1200	2.90	34.45	27.47	69	1.43
1500	(2.40)a)	(34.522)a)	-	(27.58)	1500	2.40	34.52	27.58	60	1.63

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
42	CNAV OSHAWA; April 10, 1959; 1930 GCT; 47°44'N, 131°17.5'W; sounding, 1450 fm; wind, 290°, 30 kt; weather, cloudy; sea, moderate.									
0	8.50	32.693	6.99	25.41	0	8.50	32.69	25.41	258	0.00
9	8.51	32.663	6.98	25.39	10	8.51	32.66	25.39	260	0.03
19	8.54	32.660	7.04	25.38	20	8.54	32.66	25.38	261	0.05
28	8.54	32.654	7.00	25.38	30	8.54	32.65	25.38	262	0.08
47	8.54	32.660	7.04	25.38	50	8.53	32.66	25.38	261	0.13
70	8.39	32.661	6.93	25.40	75	8.32	32.68	25.43	257	0.20
94	7.92	(32.835)a)	7.02	(25.61)	100	7.77	32.91	25.69	233	0.26
118	7.23	33.185	5.61	25.98	125	7.11	33.26	26.06	198	0.31
143	6.95	33.400	5.18	26.19	150	6.88	33.45	26.24	181	0.36
167	6.73	33.558	4.99	26.34	175	6.67	33.62	26.40	166	0.40
191	6.57	33.774	5.15	26.53	200	6.50	33.83	26.58	149	0.44
241	6.10	33.870	4.40	26.67	250	6.01	33.88	26.69	139	0.52
291	5.56	33.906	3.34	26.76	300	5.47	33.91	26.78	131	0.58
380	4.83	33.954	2.26	26.89	400	4.71	33.97	26.91	119	0.71
477	4.39	34.032	1.35	27.00	500	4.31	34.05	27.02	109	0.82
575	4.12	34.106	0.43	27.09	600	4.06	34.13	27.11	102	0.93
771	3.74	34.258	0.90	27.24	700	3.85	34.20	27.19	95	1.03
964	3.39	34.382	0.83	27.38	800	3.69	34.28	27.27	88	1.12
1154	3.06	34.442	0.45	27.46	1000	3.33	34.40	27.40	76	1.29
1441	2.50	34.525	0.73	27.57	1200	2.98	34.46	27.48	70	1.44
1500	(2.38)b)	(34.541)b)	-	(27.60)	1500	2.38	34.54	27.60	58	1.63
43	CNAV OSHAWA; April 11, 1959; 0501 GCT; 48°26.5'N, 133°07'W; sounding, 300 fm; wind, 300°, 30 kt; weather, cloudy; sea, moderate.									
0	8.50	32.791	6.99	25.49	0	8.50	32.79	25.49	250	0.00
10	8.43	32.702	6.94	25.43	10	8.43	32.70	25.43	256	0.02
25	8.46	32.701	6.97	25.42	20	8.43	32.68	25.41	258	0.05
49	8.46	32.704	6.99	25.43	30	8.46	32.70	25.42	257	0.08
74	8.40	32.710	6.91	25.44	50	8.46	32.70	25.43	257	0.13
98	8.00	32.927	6.35	25.67	75	8.39	32.71	25.45	256	0.19
123	7.20	33.517	5.50	26.25	100	7.95	32.96	25.70	231	0.26
148	6.96	33.667	5.41	26.40	125	7.16	33.55	26.27	178	0.31
172	6.68	33.746	5.32	26.50	150	6.94	33.68	26.41	165	0.35
197	6.38	33.808	5.11	26.58	175	6.64	33.75	26.51	156	0.39
246	5.76	33.856	4.36	26.70	200	6.34	33.81	26.59	148	0.43
295	5.18	33.907	2.56	26.81	250	5.71	33.86	26.71	137	0.50
393	4.67	33.971	1.81	26.92	300	5.13	33.91	26.82	127	0.57
516	4.24	34.084	1.00	27.06	400	4.64	33.98	26.93	118	0.69
					500	4.28	34.07	27.04	108	0.80

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 11, 1959; 1300 GCT; 49°31'N, 134°35'W; sounding, 1900 fm; wind, 320°, 10 kt; weather, cloudy; sea, moderate.										44
0	6.80	32.678	7.27	25.64	0	6.80	32.68	25.64	236	0.00
10	6.70	32.586	7.20	25.58	10	6.70	32.59	25.58	242	0.02
20	6.73	32.594	7.24	25.58	20	6.73	32.59	25.58	241	0.05
30	6.76	32.594	7.30	25.58	30	6.76	32.59	25.58	242	0.07
49	6.70	32.593	7.20	25.59	50	6.69	32.59	25.59	241	0.12
74	6.46	32.583	7.15	25.61	75	6.46	32.58	25.61	240	0.18
99	6.48	32.584	7.19	25.61	100	6.48	32.60	25.62	239	0.24
124	6.70	33.332	4.75	26.17	125	6.69	33.35	26.18	186	0.30
148	6.24	33.601	4.43	26.44	150	6.22	33.62	26.46	160	0.34
173	6.20	33.741	3.98	26.56	175	6.19	33.75	26.56	150	0.38
198	5.90	33.832	3.40	26.66	200	5.88	33.84	26.67	140	0.42
248	5.48	33.902	2.72	26.77	250	5.46	33.90	26.78	131	0.48
288	5.18	33.945	1.93	26.84	300	5.10	33.96	26.86	123	0.55
383	4.70	34.000	1.41	26.94	400	4.62	34.01	26.96	115	0.67
479	4.29	34.074	0.90	27.04	500	4.22	34.09	27.06	105	0.78
576	4.01	34.151	0.58	27.13	600	3.95	34.17	27.15	97	0.88
772	3.54	34.283	0.45	27.28	700	3.70	34.24	27.23	90	0.98
970	3.16	34.359	0.86	27.38	800	3.48	34.30	27.30	84	1.06
1166	2.83	34.446	0.44	27.48	1000	3.11	34.37	27.40	76	1.23
1464	2.37	34.506	0.75	27.57	1200	2.77	34.46	27.49	67	1.37
1500	(2.32)a)	(34.507)a)	-	(27.57)	1500	2.32	34.51	27.57	60	1.56
CNAV OSHAWA; April 12, 1959; 0000 GCT; 50°24'N, 135°34'W; sounding, 1850 fm; wind, 300°, 2 kt; weather, cloudy; sea, calm.										45
0	7.50	32.665	7.27	25.54	0	7.50	32.67	25.54	246	0.00
10	6.58	32.616	7.27	25.62	10	6.58	32.62	25.62	238	0.02
20	6.54	32.601	7.25	25.61	20	6.54	32.60	25.61	238	0.05
30	6.52	32.602	7.26	25.62	30	6.52	32.60	25.62	238	0.07
49	6.49	32.602	7.28	25.62	50	6.49	32.60	25.62	238	0.12
74	6.50	32.603	7.22	25.62	75	6.50	32.60	25.62	238	0.18
98	6.46	32.641	7.07	25.66	100	6.46	32.67	25.68	234	0.24
123	6.61	33.216	5.10	26.09	125	6.61	33.25	26.12	192	0.29
148	6.38	33.578	4.46	26.40	150	6.35	33.60	26.42	163	0.34
172	5.90	33.713	4.20	26.57	175	5.86	33.73	26.59	148	0.38
197	5.69	33.826	3.60	26.69	200	5.67	33.84	26.70	138	0.41
246	5.36	33.900	3.04	26.78	250	5.33	33.91	26.79	129	0.48
297	5.05	33.970	1.95	26.88	300	5.03	33.97	26.88	121	0.54
395	4.48	34.063	1.04	27.01	400	4.46	34.07	27.02	109	0.66
493	4.18	34.104	0.77	27.08	500	4.16	34.11	27.08	103	0.77
689	3.68	34.250	0.68	27.24	600	3.89	34.17	27.16	96	0.87
886	3.32	34.355	0.41	27.36	700	3.66	34.26	27.25	88	0.96
1385	2.43	34.502	0.67	27.56	800	3.46	34.31	27.32	83	1.05
1891	2.00	34.587	1.64	27.66	1000	3.11	34.40	27.42	74	1.21
3191	1.56	34.674	3.05	27.77	1200	2.76	34.47	27.50	66	1.35
					1500	2.29	34.53	27.59	58	1.54
					2000	1.93	34.60	27.68	51	1.81
					2500	1.67	34.65	27.74	46	2.06
					3000	1.56	34.67	27.76	44	2.29

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
46	CNAV OSHAWA; April 12, 1959; 0349 GCT; 50°50'N, 134°19'W; sounding, 1750 fm; wind, 220°, 5 kt; weather, cloudy; sea, slight.									
0	7.00	32.564	7.22	25.52	0	7.00	32.56	25.52	247	0.00
10	6.86	32.539	7.30	25.52	10	6.86	32.54	25.52	247	0.02
20	6.70	32.546	7.24	25.55	20	6.70	32.55	25.55	245	0.05
30	6.68	32.540	7.25	25.55	30	6.68	32.54	25.55	245	0.07
50	6.66	32.552	7.20	25.56	50	6.66	32.55	25.56	244	0.12
75	6.42	32.586	7.10	25.62	75	6.42	32.59	25.62	239	0.18
100	6.40	32.594	7.22	25.63	100	6.40	32.59	25.63	238	0.24
124	6.48	33.313	4.96	26.18	125	6.47	33.33	26.20	184	0.30
149	5.92	33.628	4.46	26.50	150	5.90	33.64	26.51	155	0.34
174	5.69	33.783	4.00	26.65	175	5.68	33.79	26.66	141	0.38
198	5.51	33.861	3.29	26.74	200	5.50	33.87	26.74	134	0.41
248	5.22	33.943	2.15	26.83	250	5.21	33.95	26.84	125	0.48
297	4.84	33.967	1.91	26.90	300	4.82	33.97	26.90	119	0.54
401	4.44	34.070	1.05	27.02	400	4.44	34.07	27.02	108	0.65
502	4.14	34.141	0.77	27.11	500	4.15	34.14	27.11	101	0.76
602	3.98	34.200	0.57	27.17	600	3.98	34.20	27.17	96	0.86
802	3.48	34.317	0.49	27.32	700	3.76	34.26	27.24	90	0.95
1003	3.00	34.392	0.48	27.42	800	3.49	34.32	27.32	83	1.04
1203	2.70	34.507	0.65	27.54	1000	3.01	34.39	27.42	74	1.20
1503	2.30	34.524	0.82	27.59	1200	2.70	34.50	27.54	63	1.34
					1500	2.30	34.52	27.59	58	1.52
47	CNAV OSHAWA; April 12, 1959; 0950 GCT; 51°17'N, 133°00'W; sounding, 1550 fm; wind, 270°, 5 kt; weather, cloudy; sea, calm.									
0	7.30	32.601	7.10	25.51	0	7.30	32.60	25.51	248	0.00
10	7.08	32.570	7.23	25.52	10	7.08	32.57	25.52	248	0.02
20	7.08	32.569	7.20	25.52	20	7.08	32.57	25.52	248	0.05
30	7.03	32.566	7.19	25.52	30	7.03	32.57	25.52	247	0.08
49	6.98	32.566	7.17	25.53	50	6.98	32.57	25.53	247	0.12
74	6.97	32.567	7.21	25.53	75	6.97	32.57	25.53	247	0.19
99	6.88	32.576	7.11	25.55	100	6.87	32.59	25.56	244	0.25
124	6.50	33.397	5.04	26.25	125	6.49	33.42	26.26	178	0.30
148	6.28	33.599	4.67	26.43	150	6.26	33.61	26.45	161	0.34
173	6.00	33.766	4.12	26.60	175	5.98	33.78	26.61	146	0.38
198	5.76	33.845	4.02	26.69	200	5.74	33.85	26.70	138	0.42
247	5.31	33.898	3.25	26.79	250	5.29	33.90	26.79	129	0.49
297	5.14	33.951	2.27	26.85	300	5.13	33.95	26.85	124	0.55
395	4.57	34.023	1.37	26.97	400	4.54	34.03	26.98	113	0.67
493	4.15	34.115	0.82	27.09	500	4.13	34.12	27.10	102	0.78
591	4.06	34.203	0.68	27.17	600	4.04	34.21	27.18	95	0.88
787	3.44	34.320	0.45	27.32	700	3.79	34.28	27.26	88	0.97
986	3.08	34.383	0.43	27.41	800	3.41	34.33	27.33	81	1.06
1170	2.75	34.437	0.46	27.48	1000	3.05	34.39	27.41	74	1.21
1479	2.38	34.508	0.67	27.57	1200	2.70	34.44	27.49	67	1.36
1500	(2.36)a)	(34.512)a)	-	(27.57)	1500	2.36	34.51	27.57	60	1.55

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 12, 1959; 1511 GCT; 51°42'N, 131°48'W; sounding, 1200 fm; wind, 320°, 5 kt; weather, cloudy; sea, slight.										48
0	7.90	32.327	7.09	25.21	0	7.90	32.33	25.21	276	0.00
10	7.82	32.297	7.10	25.20	10	7.82	32.30	25.20	278	0.03
19	7.89	32.326	6.99	25.21	20	7.88	32.33	25.22	276	0.06
29	7.63	32.444	6.55	25.34	30	7.61	32.45	25.35	263	0.08
49	7.58	32.556	6.17	25.44	50	7.58	32.56	25.44	255	0.14
73	7.50	32.661	5.69	25.53	75	7.49	32.68	25.54	246	0.20
98	7.42	32.911	5.22	25.74	100	7.41	32.93	25.76	226	0.26
123	7.32	33.134	4.70	25.93	125	7.31	33.15	25.95	208	0.31
147	7.18	33.414	4.25	26.17	150	7.17	33.45	26.20	185	0.36
171	7.12	33.682	3.42	26.39	175	7.09	33.71	26.42	165	0.41
196	6.82	33.822	3.05	26.54	200	6.78	33.84	26.56	152	0.45
245	6.52	33.918	2.70	26.65	250	6.48	33.92	26.66	142	0.52
295	6.04	33.940	2.61	26.73	300	6.00	33.94	26.74	135	0.59
371	5.47	33.986	2.00	26.84	400	5.26	34.00	26.87	123	0.72
469	4.76	34.023	1.51	26.95	500	4.67	34.05	26.98	113	0.84
569	4.69	34.146	0.78	27.06	600	4.63	34.18	27.09	105	0.95
769	3.97	34.267	0.41	27.23	700	4.31	34.24	27.18	97	1.05
969	3.46	34.363	0.50	27.36	800	3.88	34.28	27.25	90	1.14
1168	2.97	34.436	0.45	27.46	1000	3.38	34.38	27.37	79	1.32
1465	2.48	34.500	0.88	27.55	1200	2.90	34.45	27.47	70	1.47
1500	(2.44)a)	(34.504)a)	-	(27.56)	1500	2.44	34.50	27.56	62	1.67
CNAV OSHAWA; April 12, 1959; 1836 GCT; 51°51.5'N, 131°14.5'W; sounding, 900 fm; wind, 330°, 5 kt; weather, cloudy; sea, calm.										49
0	7.90	32.332	7.21	25.22	0	7.90	32.33	25.22	276	0.00
10	7.35	32.303	-	25.27	10	7.35	32.30	25.27	271	0.03
20	7.38	32.312	7.11	25.28	20	7.38	32.31	25.28	271	0.06
30	7.39	32.310	7.09	25.27	30	7.39	32.31	25.27	271	0.08
50	7.38	32.316	7.05	25.28	50	7.38	32.32	25.28	271	0.14
75	7.23	32.365	6.88	25.34	75	7.23	32.36	25.34	266	0.20
100	7.23	32.650	6.23	25.56	100	7.23	32.65	25.56	245	0.27
125	7.30	32.777	5.76	25.65	125	7.30	32.78	25.65	236	0.33
150	7.28	33.045	4.98	25.86	150	7.28	33.05	25.86	217	0.39
175	7.17	33.291	4.37	26.07	175	7.17	33.29	26.07	197	0.44
200	6.99	33.610	3.66	26.35	200	6.99	33.61	26.35	172	0.48
250	6.48	33.838	3.16	26.60	250	6.48	33.84	26.60	148	0.56
300	6.00	33.919	2.60	26.72	300	6.00	33.92	26.72	137	0.64
400	5.22	33.974	1.87	26.86	400	5.22	33.97	26.86	125	0.77
499	4.66	34.093	1.43	27.02	500	4.65	34.09	27.02	110	0.89
599	4.13	34.152	0.72	27.12	600	4.13	34.15	27.12	101	0.99
798	3.72	34.306	0.44	27.28	700	3.81	34.22	27.21	93	1.09
998	3.25	34.380	0.46	27.39	800	3.72	34.31	27.29	86	1.18
1197	2.84	34.449	0.50	27.48	1000	3.25	34.38	27.39	77	1.35
1493	2.40	34.606	0.77	27.65	1200	2.83	34.45	27.48	68	1.49
1500	(2.39)a)	(34.610)a)	-	(27.65)	1500	2.39	34.61	27.65	53	1.68

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
50	CNAV OSHAWA; April 12, 1959; 2040 GCT; 51°55.5'N, 131°03.5'W; sounding, 110 fm; wind, 320°, 4 kt; weather, cloudy; sea, calm.									
0	8.20	32.404	6.67	25.23	0	8.20	32.40	25.23	275	0.00
2	7.76	32.358	6.67	25.26	10	7.65	32.37	25.28	270	0.03
6	7.67	32.364	6.62	25.28	20	7.62	32.37	25.29	270	0.06
10	7.65	32.368	6.62	25.28	30	7.60	32.38	25.30	269	0.08
20	7.62	32.369	6.53	25.29	50	7.57	32.44	25.35	264	0.14
40	7.60	32.396	6.68	25.31	75	7.55	32.59	25.47	253	0.20
60	7.52	32.509	6.21	25.41	100	7.40	33.05	25.85	218	0.26
80	7.57	32.617	5.81	25.49	125	7.37	33.06	25.86	217	0.31
99	7.41	33.033	4.81	25.84	150	7.32	33.09	25.89	214	0.37
124	7.37	33.056	4.80	25.86	175	7.32	33.08	25.89	215	0.42
149	7.32	33.086	4.55	25.89						
174	7.32	33.085	4.73	25.89						
175	(7.32)a)	(33.084)a)	-	(25.89)						
51	CNAV OSHAWA; April 13, 1959; 0224 GCT; 51°33.5'N, 130°17.5'W; sounding, 520 fm; wind, 320°, 15 kt; weather, partly cloudy; sea, slight.									
0	8.80	32.210	7.05	24.99	0	8.80	32.21	24.99	298	0.00
10	8.30	32.195	7.14	25.05	10	8.30	32.19	25.05	292	0.03
24	8.12	32.249	7.13	25.12	20	8.11	32.22	25.10	287	0.06
48	7.90	32.346	6.89	25.23	30	8.05	32.27	25.15	283	0.09
73	7.88	32.438	6.76	25.30	50	7.89	32.35	25.24	275	0.14
97	7.84	32.732	6.03	25.54	75	7.88	32.45	25.32	268	0.21
120	7.68	33.148	4.97	25.89	100	7.83	32.78	25.58	243	0.28
144	7.51	33.608	3.75	26.27	125	7.64	33.24	25.97	207	0.33
190	7.16	33.881	2.63	26.54	150	7.47	33.69	26.34	171	0.38
237	6.78	33.923	2.74	26.62	175	7.28	33.88	26.52	155	0.42
284	6.32	33.974	2.29	26.72	200	7.08	33.91	26.57	150	0.46
378	5.52	34.011	1.65	26.85	250	6.66	33.94	26.65	144	0.53
564	4.53	34.153	0.80	27.08	300	6.17	33.99	26.75	134	0.60
858	3.52	34.359	0.56	27.35	400	5.36	34.02	26.88	123	0.73
					500	4.78	34.09	27.00	112	0.85
					600	4.37	34.18	27.12	101	0.96
					700	3.98	34.25	27.22	92	1.06
					800	3.67	34.32	27.30	85	1.15
52	CNAV OSHAWA; April 13, 1959; 0607 GCT; 51°01'N, 129°32.5'W; sounding, 180 fm; wind, 310°, 10 kt; weather, partly cloudy; sea, slight.									
0	8.90	32.194	7.11	24.96	0	8.90	32.19	24.96	300	0.00
9	8.30	32.184	7.08	25.04	10	8.27	32.18	25.05	292	0.03
19	8.27	32.180	7.08	25.05	20	8.26	32.18	25.05	292	0.06
28	8.18	32.194	7.10	25.07	30	8.16	32.20	25.07	290	0.09
47	8.05	32.205	7.03	25.10	50	8.02	32.21	25.11	287	0.15
70	7.77	32.300	6.79	25.21	75	7.76	32.37	25.26	273	0.22
93	7.87	32.741	5.74	25.54	100	7.90	32.88	25.64	237	0.28
117	7.98	33.208	4.63	25.89	125	7.93	33.27	25.95	209	0.34
140	7.70	33.251	3.55	25.97	150	7.52	33.40	26.11	193	0.39
164	7.22	33.751	3.02	26.43						
53	CNAV OSHAWA; April 13, 1959; 0734 GCT; 50°55.5'N, 129°15.5'W; sounding, 60 fm; wind, 310°, 10 kt; weather, cloudy; sea, slight.									
0	8.70	31.966	7.00	24.81	0	8.70	31.97	24.81	314	0.00
2	8.54	31.956	7.00	24.83	10	8.54	31.95	24.82	314	0.03
6	8.53	31.950	7.08	24.83	20	8.56	31.97	24.84	313	0.06
10	8.54	31.948	7.03	24.82	30	8.52	31.99	24.86	310	0.09
20	8.56	31.968	7.03	24.84	50	8.36	32.09	24.96	301	0.16
39	8.42	32.020	6.98	24.90	75	8.10	32.47	25.29	270	0.23
59	8.32	32.177	6.77	25.04						
79	8.02	32.561	6.33	25.38						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

54

CNAV OSHAWA; April 13, 1959; 0857 GCT; 50°48.5'N, 129°00'W; sounding, 50 fm; wind, 020°, 15 kt; weather, cloudy; sea, slight.

0	8.50	32.078	6.92	24.93	0	8.50	32.08	24.93	303	0.00
2	8.40	32.020	6.92	24.90	10	8.42	32.02	24.89	307	0.03
6	8.43	32.020	6.94	24.90	20	8.43	32.02	24.90	307	0.06
10	8.42	32.016	6.95	24.89	30	8.40	32.04	24.92	305	0.09
20	8.43	32.022	6.90	24.90	50	8.31	32.09	24.97	300	0.15
39	8.34	32.063	6.79	24.94	75	8.24	32.21	25.07	291	0.23
59	8.30	32.113	6.58	24.99						
78	8.23	32.236	6.41	25.09						
88	8.23	32.283	6.27	25.13						

55

CNAV OSHAWA; April 13, 1959; 1003 GCT; 50°44.5'N, 128°44.5'W; sounding, 50 fm; wind, 020°, 20 kt; weather, partly cloudy; sea, slight.

0	8.70	31.653	7.08	24.57	0	8.70	31.65	24.57	338	0.00
2	8.78	31.595	7.12	24.51	10	8.78	31.60	24.51	343	0.03
6	8.79	31.596	7.05	24.51	20	8.73	31.64	24.55	340	0.07
10	8.78	31.597	7.11	24.51	30	8.67	31.78	24.68	328	0.10
19	8.74	31.630	7.00	24.55	50	8.45	32.16	25.00	297	0.16
38	8.60	31.974	6.87	24.84	75	8.18	32.46	25.28	272	0.24
57	8.34	32.253	6.78	25.09						
77	8.17	32.479	6.32	25.29						
86	7.84	33.016	4.52	25.76						

56

CNAV OSHAWA; April 13, 1959; 1108 GCT; 50°46.5'N, 128°29.5'W; sounding, 40 fm; wind, 020°, 20 kt; weather, cloudy; sea, slight.

0	7.50	31.746	7.05	24.81	0	7.50	31.75	24.81	314	0.00
2	8.72	31.650	7.06	24.56	10	8.74	31.66	24.57	338	0.03
6	8.74	31.655	7.04	24.56	20	8.71	31.68	24.59	336	0.07
10	8.74	31.658	7.10	24.57	30	8.55	31.82	24.72	324	0.10
19	8.72	31.675	7.06	24.58	50	8.41	31.89	24.80	316	0.16
29	8.56	31.806	6.81	24.71	75	8.27	32.38	25.20	278	0.24
48	8.42	31.872	6.81	24.78						
69	8.30	32.228	6.49	25.08						
75	(8.27)a)	(32.384)a)	-	(25.20)						

57

CNAV OSHAWA; April 13, 1959; 1238 GCT; 50°59'N, 128°26'W; sounding, 45 fm; wind, 010°, 20 kt; weather, cloudy; sea, moderate.

0	8.10	31.595	7.03	24.61	0	8.10	31.59	24.61	334	0.00
2	8.08	31.563	6.99	24.59	10	8.06	31.55	24.59	336	0.03
6	8.08	31.558	6.99	24.59	20	8.09	31.58	24.60	335	0.07
9	8.06	31.554	6.97	24.59	30	8.02	31.64	24.66	330	0.10
19	8.09	31.572	6.98	24.60	50	7.92	31.87	24.85	312	0.16
38	7.90	31.717	6.67	24.74	75	7.97	32.03	24.97	300	0.24
57	7.99	31.973	6.56	24.92						
76	7.97	32.032	6.45	24.97						

58

CNAV OSHAWA; April 13, 1959; 1444 GCT; 51°00.5'N, 127°51'W; sounding, 65 fm; wind, 020°, 15 kt; weather, partly cloudy; sea, slight.

0	7.90	31.278	6.66	24.39	0	7.90	31.28	24.39	354	0.00
2	7.77	31.252	6.50	24.39	10	7.79	31.26	24.39	355	0.04
6	7.78	31.256	6.58	24.39	20	7.80	31.28	24.41	353	0.07
10	7.79	31.257	6.52	24.39	30	7.78	31.41	24.51	343	0.11
20	7.80	31.280	6.63	24.41	50	7.76	31.60	24.67	329	0.17
30	7.78	31.412	6.66	24.51	75	7.83	32.02	24.98	300	0.25
50	7.76	31.603	6.58	24.67	100	7.68	32.94	25.73	229	0.32
75	7.83	32.018	4.84	24.98	125	7.54	33.38	26.09	195	0.37
100	7.68	32.940	4.54	25.73						
125	7.54	33.376	3.74	26.09						

a) Value extrapolated by three-point parabolic method.

	OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
59	CNAV OSHAWA; April 13, 1959; 1657 GCT; 50°52.5'N, 127°18.5'W; sounding, 60 fm; wind, 280°, 10 kt; weather, partly cloudy; sea, slight.										
	0	8.10	30.990	6.84	24.14	0	8.10	30.99	24.14	379	0.00
	2	7.80	30.976	6.82	24.17	10	7.81	30.99	24.18	375	0.04
	6	7.79	30.977	6.84	24.17	20	7.78	31.01	24.20	374	0.08
	10	7.81	30.988	6.75	24.18	30	7.70	31.09	24.27	367	0.11
	20	7.78	31.006	6.68	24.20	50	7.55	31.29	24.45	350	0.18
	40	7.58	31.226	6.17	24.40	75	7.59	31.51	24.62	334	0.27
	60	7.57	31.315	6.15	24.47	100	7.62	31.60	24.69	328	0.35
	80	7.60	31.596	5.98	24.68						
	99	7.62	31.608	5.83	24.69						
	100	(7.62)a)	(31.602)a)	-	(24.69)						
60	CNAV OSHAWA; April 13, 1959; 1738 GCT; 50°49.5'N, 127°20'W; sounding, 80 fm; wind, 280°, 10 kt; weather, partly cloudy; sea, slight.										
	0	7.90	30.992	-	24.17	0	7.90	30.99	24.17	376	0.00
	2	7.82	30.969	6.93	24.16	10	7.81	30.97	24.16	376	0.04
	6	7.82	30.969	6.83	24.16	20	7.80	30.99	24.18	375	0.08
	10	7.81	30.970	6.94	24.16	30	7.75	31.04	24.22	371	0.11
	19	7.80	30.982	6.26	24.17	50	7.59	31.24	24.41	354	0.19
	38	7.69	31.105	6.76	24.29	75	7.55	31.46	24.58	338	0.27
	57	7.52	31.339	6.34	24.49	100	7.64	31.66	24.73	324	0.36
	77	7.57	31.462	6.21	24.58	125	7.63	31.77	24.82	316	0.44
	96	7.63	31.633	5.87	24.71						
	120	7.64	31.760	5.94	24.81						
	125	(7.63)a)	(31.774)a)	-	(24.82)						
61	CNAV OSHAWA; April 13, 1959; 1814 GCT; 50°46.5'N, 127°23.5'W; sounding, 80 fm; wind, 280°, 10 kt; weather, partly cloudy; sea, slight.										
	0	8.00	31.061	7.24	24.21	0	8.00	31.06	24.21	372	0.00
	2	8.00	31.041	7.29	24.19	10	7.98	31.04	24.20	373	0.04
	6	8.01	31.041	7.20	24.19	20	7.91	31.05	24.21	372	0.08
	10	7.98	31.041	7.16	24.20	30	7.73	31.13	24.30	364	0.11
	19	7.92	31.046	7.05	24.21	50	7.52	31.35	24.50	345	0.18
	38	7.50	31.250	6.28	24.43	75	7.71	31.54	24.62	334	0.27
	57	7.63	31.394	6.26	24.52	100	7.78	31.74	24.77	320	0.35
	77	7.72	31.556	6.15	24.64	125	7.79	31.88	24.88	310	0.43
	96	7.77	31.713	6.10	24.75						
	120	7.79	31.861	5.98	24.86						
	125	(7.79)a)	(31.885)a)	-	(24.88)						
62	CNAV OSHAWA; April 14, 1959; 0544 GCT; 51°25.5'N, 127°49.5'W; sounding, 55 fm; wind, 180°, 5 kt; weather, intermittent slight rain; sea, calm.										
	0	8.00	29.575	8.40	23.05	0	8.00	29.58	23.05	483	0.00
	2	7.84	29.600	8.62	23.09	10	7.52	30.02	23.46	444	0.05
	6	7.84	29.590	8.53	23.08	20	7.30	30.92	24.19	374	0.09
	10	7.52	30.016	7.42	23.46	30	7.27	31.31	24.50	345	0.12
	20	7.30	30.920	6.45	24.19	50	7.50	31.29	24.46	349	0.19
	40	7.42	31.172	6.42	24.38	75	7.70	31.74	24.78	319	0.28
	60	7.60	31.401	6.07	24.53						
	80	7.73	31.879	5.75	24.89						
	90	7.80	32.161	5.74	25.10						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

63

CNAV OSHAWA; April 14, 1959; 2055 GCT; 51°22'N, 128°36.5'W; sounding, 110 fm; wind, 180°, 10 kt; weather, moderate rain; sea, slight.

0	7.60	31.562	7.05	24.66	0	7.60	31.56	24.66	329	0.00
2	7.81	31.553	7.11	24.62	10	7.82	31.56	24.62	333	0.03
5	7.83	31.567	7.13	24.63	20	7.85	31.58	24.63	332	0.07
9	7.82	31.558	7.13	24.62	30	7.91	31.63	24.66	329	0.10
17	7.84	31.570	7.13	24.63	50	7.98	31.63	24.66	330	0.17
35	7.95	31.660	7.00	24.68	75	7.72	31.72	24.77	320	0.25
52	7.98	31.619	7.08	24.65	100	7.90	32.17	25.09	289	0.32
69	7.72	31.686	6.88	24.74	125	7.95	32.86	25.63	239	0.39
87	7.86	31.822	6.85	24.82						
108	7.89	32.495	5.92	25.35						
130	7.98	32.944	5.14	25.69						

64

CNAV OSHAWA; April 14, 1959; 1033 GCT; 51°30'N, 128°42.5'W; sounding, 21 fm; wind, 140°, 20 kt; weather, overcast; sea, slight.

0	7.60	31.636	7.40	24.71	0	7.60	31.64	24.71	324	0.00
2	7.84	31.627	7.40	24.67	10	7.86	31.63	24.67	328	0.03
6	7.85	31.625	7.38	24.67	20	7.88	31.62	24.67	329	0.07
10	7.86	31.625	7.47	24.67	30	7.87	31.62	24.67	329	0.10
20	7.88	31.624	7.47	24.67						
34	7.86	31.625	7.40	24.67						

65

CNAV OSHAWA; April 14, 1959; 1140 GCT; 51°39.5'N, 128°41.5'W; sounding, 21 fm; wind, 090°, 10 kt; weather, moderate rain; sea, slight.

0	7.60	31.607	7.18	24.69	0	7.60	31.61	24.69	326	0.00
2	7.82	31.602	7.14	24.66	10	7.84	31.60	24.65	330	0.03
6	7.84	31.596	7.16	24.65	20	7.86	31.61	24.65	330	0.07
10	7.84	31.598	7.15	24.65	30	7.85	31.63	24.68	328	0.10
20	7.86	31.605	7.13	24.65						
34	7.84	31.650	7.04	24.69						

66

CNAV OSHAWA; April 14, 1959; 1257 GCT; 51°48'N, 128°34.5'W; sounding, 74 fm; wind, 040°, 5 kt; weather, cloudy; sea, slight.

0	7.50	30.465	7.74	23.81	0	7.50	30.47	23.81	410	0.00
2	7.60	30.449	7.39	23.78	10	7.64	30.46	23.79	412	0.04
6	7.62	30.451	7.39	23.78	20	7.62	30.97	24.19	374	0.08
10	7.64	30.460	7.32	23.79	30	7.60	31.25	24.41	353	0.12
20	7.62	30.970	6.73	24.19	50	7.59	31.47	24.58	337	0.19
39	7.58	31.310	6.96	24.46	75	7.72	31.66	24.72	325	0.27
59	7.62	31.571	6.83	24.66	100	7.82	32.26	25.17	282	0.35
79	7.76	31.668	6.85	24.72	125	7.42	33.30	26.04	200	0.41
98	7.83	32.189	6.47	25.12						
128	7.34	33.446	3.58	26.17						

67

CNAV OSHAWA; April 14, 1959; 1613 GCT; 52°10.5'N, 129°11.5'W; sounding, 85 fm; wind, 340°, 15 kt; weather, partly cloudy; sea, moderate.

0	7.80	31.542	7.16	24.61	0	7.80	31.54	24.61	334	0.00
2	7.82	31.498	7.16	24.58	10	7.84	31.51	24.58	336	0.03
6	7.83	31.505	7.14	24.58	20	7.90	31.66	24.69	327	0.07
10	7.84	31.510	7.21	24.58	30	7.91	31.79	24.79	317	0.10
20	7.90	31.656	7.04	24.69	50	7.84	31.98	24.95	302	0.16
40	7.88	31.914	6.89	24.89	75	7.79	32.05	25.01	296	0.24
60	7.79	32.005	6.78	24.98	100	7.81	32.33	25.23	277	0.31
80	7.81	32.063	6.76	25.02	125	7.60	32.87	25.68	234	0.37
100	7.81	32.326	6.26	25.23	150	7.24	33.34	26.10	194	0.43
125	7.60	32.869	4.92	25.68						
150	7.24	33.341	3.72	26.10						

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
68	CNAV OSHAWA; April 14, 1959; 1726 GCT; 52°10.5'N, 128°55.5'W; sounding, 80 fm; wind, 340°, 15 kt; weather, partly cloudy; sea, slight.									
0	7.60	30.917	7.14	24.15	0	7.60	30.92	24.15	378	0.00
2	7.67	30.911	7.16	24.14	10	7.69	30.98	24.18	374	0.04
5	7.70	30.912	7.18	24.13	20	7.80	31.27	24.40	354	0.07
9	7.69	30.958	7.21	24.17	30	7.87	31.54	24.60	335	0.11
18	7.78	31.211	7.18	24.36	50	7.85	31.81	24.82	315	0.17
35	7.90	31.679	7.06	24.71	75	7.78	31.94	24.93	304	0.25
53	7.82	31.806	6.99	24.82	100	7.83	32.18	25.11	288	0.33
71	7.78	31.915	6.85	24.91						
88	7.83	32.053	6.70	25.01						
110	7.82	32.315	6.52	25.22						
69	CNAV OSHAWA; April 14, 1959; 1841 GCT; 52°12.5'N, 128°42'W; sounding, 100 fm; wind, 340°, 10 kt; weather, partly cloudy; sea, slight.									
0	7.90	30.188	6.91	23.54	0	7.90	30.19	23.54	436	0.00
2	7.56	30.165	6.89	23.57	10	7.52	30.24	23.63	427	0.04
6	7.54	30.170	6.87	23.57	20	7.30	30.95	24.22	371	0.08
10	7.52	30.238	6.77	23.63	30	7.24	31.31	24.51	344	0.12
20	7.30	30.952	5.99	24.22	50	7.48	31.48	24.61	334	0.19
40	7.34	31.306	6.09	24.49	75	7.77	31.82	24.84	313	0.27
60	7.70	31.660	6.93	24.72	100	7.82	32.01	24.98	300	0.35
79	7.76	31.852	6.80	24.86	125	7.79	32.49	25.36	264	0.42
99	7.82	32.002	6.84	24.97	150	7.59	33.08	25.85	218	0.48
124	7.79	32.468	5.79	25.34	175	7.48	33.28	26.02	202	0.53
149	7.60	33.068	4.28	25.84						
174	7.48	33.280	3.78	26.02						
175	(7.48)a)	(33.280)a)	-	(26.02)						
70	CNAV OSHAWA; April 14, 1959; 2110 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.									
0	8.40	30.168	7.21	23.45	0	8.40	30.17	23.45	444	0.00
10	7.52	30.648	6.38	23.95	10	7.52	30.65	23.95	397	0.04
40	7.55	31.455	6.62	24.58	20	7.09	31.02	24.30	363	0.08
100	7.86	32.204	6.52	25.12	30	7.10	31.29	24.51	343	0.12
150	7.56	33.134	4.13	25.89	50	7.58	31.66	24.74	322	0.18
200	7.44	33.379	3.54	26.10	75	7.69	32.03	25.01	296	0.26
240	7.30	33.495	3.35	26.21	100	7.86	32.20	25.12	286	0.33
					125	7.77	32.63	25.47	254	0.40
					150	7.56	33.13	25.89	214	0.46
					175	7.48	33.34	26.07	198	0.51
					200	7.44	33.38	26.10	195	0.56
71	CNAV OSHAWA; April 14, 1959; 2200 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.									
0	8.20	30.331	6.89	23.61	0	8.20	30.33	23.61	429	0.00
10	7.45	30.689	6.18	23.99	10	7.45	30.69	23.99	393	0.04
40	7.59	31.468	6.78	24.58	20	7.10	31.00	24.28	365	0.08
100	7.86	32.211	6.52	25.13	30	7.14	31.26	24.48	347	0.12
150	7.58	33.112	-	25.87	50	7.64	31.67	24.73	323	0.18
200	7.42	33.376	3.56	26.10	75	7.75	32.03	25.01	297	0.26
240	7.28	33.498	3.29	26.22	100	7.86	32.21	25.13	286	0.33
					125	7.78	32.63	25.47	254	0.40
					150	7.58	33.11	25.87	216	0.46
					175	7.48	33.32	26.05	199	0.51
					200	7.42	33.38	26.10	195	0.56

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

72

CNAV OSHAWA; April 14, 1959; 2303 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.

0	8.30	30.390	6.78	23.64
10	7.48	30.735	6.40	24.02
40	7.61	31.469	6.85	24.58
100	7.86	32.234	6.44	25.15
150	7.59	33.126	4.16	25.89
200	7.38	33.368	3.72	26.11
240	7.28	33.510	3.35	26.24

73

CNAV OSHAWA; April 15, 1959; 0001 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.

0	8.20	30.497	6.62	23.74	0	8.20	30.50	23.74	417	0.00
10	7.52	30.696	6.45	23.99	10	7.52	30.70	23.99	393	0.04
40	7.60	31.467	6.86	24.58	20	7.19	30.92	24.21	372	0.08
100	7.84	32.220	6.52	25.14	30	7.22	31.18	24.41	353	0.12
150	7.58	33.104	4.16	25.87	50	7.63	31.67	24.73	323	0.18
200	7.36	33.375	3.59	26.11	75	7.73	32.03	25.01	297	0.26
240	7.29	33.504	3.26	26.22	100	7.84	32.22	25.14	285	0.34
					125	7.76	32.63	25.47	254	0.40
					150	7.58	33.10	25.87	216	0.46
					175	7.47	33.32	26.05	199	0.51
					200	7.36	33.38	26.11	194	0.56

74

CNAV OSHAWA; April 15, 1959; 0059 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.

0	8.40	30.598	6.48	23.79	0	8.40	30.60	23.79	412	0.00
10	7.44	30.692	6.16	24.00	10	7.44	30.69	24.00	392	0.04
40	7.64	31.485	6.83	24.59	20	6.99	30.87	24.20	373	0.08
100	7.84	32.180	6.53	25.11	30	7.06	31.14	24.40	355	0.12
150	7.58	33.127	4.19	25.89	50	7.69	31.68	24.74	322	0.18
200	7.38	33.319	3.76	26.07	75	7.79	32.03	25.00	298	0.26
240	7.28	33.496	3.36	26.22	100	7.84	32.18	25.11	288	0.34
					125	7.76	32.61	25.46	255	0.40
					150	7.58	33.13	25.89	215	0.46
					175	7.47	33.32	26.05	199	0.52
					200	7.38	33.32	26.07	198	0.56

75

CNAV OSHAWA; April 15, 1959; 0256 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.

0	8.20	30.442	6.76	23.70	0	8.20	30.44	23.70	421	0.00
10	7.42	30.844	6.09	24.12	10	7.42	30.84	24.12	381	0.04
40	7.62	31.460	6.63	24.57	20	7.06	31.15	24.40	354	0.08
100	7.84	32.210	6.28	25.13	30	7.13	31.35	24.56	339	0.11
150	7.57	33.138	4.00	25.90	50	7.67	31.63	24.70	326	0.18
200	7.40	33.319	3.74	26.06	75	7.78	31.98	24.96	302	0.26
240	7.14	33.565	3.68	26.29	100	7.84	32.21	25.13	286	0.33
					125	7.76	32.64	25.48	253	0.40
					150	7.57	33.14	25.90	214	0.46
					175	7.47	33.32	26.05	199	0.51
					200	7.40	33.32	26.06	199	0.56

76

CNAV OSHAWA; April 15, 1959; 0459 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.

0	7.60	30.280	6.62	23.65	0	7.60	30.28	23.65	425	0.00
10	7.36	30.928	6.32	24.19	10	7.36	30.93	24.19	374	0.04
40	7.55	31.451	6.82	24.58	20	7.27	31.34	24.53	342	0.08
100	7.84	32.131	6.60	25.07	30	7.33	31.51	24.65	330	0.11
150	7.56	33.118	4.10	25.88	50	7.61	31.60	24.68	327	0.18
200	7.40	33.328	3.74	26.07	75	7.73	31.91	24.91	306	0.26
240	7.10	33.590	3.11	26.32	100	7.84	32.13	25.07	292	0.33
					125	7.76	32.58	25.43	258	0.40
					150	7.56	33.12	25.88	215	0.46
					175	7.46	33.32	26.05	199	0.51
					200	7.40	33.33	26.07	198	0.56

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
77	CNAV OSHAWA; April 15, 1959; 0658 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.									
0	7.30	30.281	6.72	23.69	0	7.30	30.28	23.69	421	0.00
10	7.42	30.924	6.37	24.18	10	7.42	30.92	24.18	375	0.04
40	7.58	31.465	6.58	24.58	20	7.51	31.34	24.49	345	0.08
100	6.84	32.134	6.50	25.21	30	7.56	31.52	24.63	333	0.11
150	7.56	33.156	3.98	25.91	50	7.55	31.61	24.70	326	0.18
200	7.41	33.316	3.72	26.06	75	7.32	31.92	24.98	300	0.26
240	7.08	33.628	2.94	26.35	100	6.84	32.13	25.21	278	0.33
					125	7.05	32.59	25.54	247	0.39
					150	7.56	33.16	25.91	212	0.45
					175	7.59	33.34	26.05	199	0.50
					200	7.41	33.32	26.06	199	0.55
78	CNAV OSHAWA; April 15, 1959; 0901 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.									
0	7.50	29.802	7.89	23.29	0	7.50	29.80	23.29	460	0.00
10	7.34	31.086	5.93	24.32	10	7.34	31.09	24.32	362	0.04
40	7.66	31.486	6.90	24.59	20	7.31	31.79	24.88	308	0.08
100	7.85	32.153	6.57	25.08	30	7.42	31.93	24.97	300	0.11
150	7.53	33.194	4.00	25.95	50	7.73	31.61	24.68	328	0.17
200	7.40	33.338	3.75	26.08	75	7.84	31.90	24.88	309	0.25
240	7.02	33.635	2.92	26.36	100	7.85	32.15	25.08	290	0.32
					125	7.74	32.62	25.46	254	0.39
					150	7.53	33.19	25.95	209	0.45
					175	7.44	33.38	26.10	194	0.50
					200	7.40	33.34	26.08	197	0.55
79	CNAV OSHAWA; April 15, 1959; 1100 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.									
0	7.40	29.752	7.98	23.27	0	7.40	29.75	23.27	462	0.00
10	7.74	30.449	7.39	23.77	10	7.74	30.45	23.77	414	0.04
40	7.62	31.532	6.77	24.63	20	7.89	30.98	24.16	377	0.08
100	7.85	32.208	6.42	25.13	30	7.85	31.34	24.45	350	0.12
150	7.55	33.165	4.06	25.92	50	7.61	31.78	24.83	314	0.19
200	7.40	33.356	3.68	26.09	75	7.68	32.17	25.12	286	0.26
240	7.03	33.629	2.91	26.36	100	7.85	32.21	25.13	286	0.33
					125	7.76	32.64	25.48	253	0.40
					150	7.55	33.17	25.92	211	0.46
					175	7.46	33.36	26.08	196	0.51
					200	7.40	33.36	26.09	196	0.56
80	CNAV OSHAWA; April 15, 1959; 1300 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.									
0	7.70	29.527	8.49	23.05	0	7.70	29.53	23.05	483	0.00
10	7.68	30.557	7.20	23.86	10	7.68	30.56	23.86	406	0.04
40	7.54	31.403	6.68	24.54	20	7.65	31.21	24.38	356	0.08
100	7.85	32.188	6.49	25.11	30	7.60	31.49	24.60	335	0.12
150	7.59	33.161	4.00	25.91	50	7.54	31.62	24.71	325	0.18
200	7.39	33.364	3.66	26.10	75	7.63	32.01	25.00	297	0.26
240	6.99	33.653	2.88	26.38	100	7.85	32.19	25.11	287	0.34
					125	7.78	32.64	25.47	253	0.40
					150	7.59	33.16	25.91	212	0.46
					175	7.48	33.36	26.08	196	0.51
					200	7.39	33.36	26.10	195	0.56

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 15, 1959; 1459 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.										81
0	7.90	29.642	7.31	23.11	0	7.90	29.64	23.11	477	0.00
10	7.73	30.408	7.49	23.74	10	7.73	30.41	23.74	417	0.04
40	7.64	31.476	6.65	24.58	20	7.63	30.97	24.19	374	0.08
100	7.84	32.196	6.27	25.12	30	7.60	31.33	24.47	347	0.12
150	7.55	33.168	3.96	25.92	50	7.64	31.73	24.78	318	0.19
200	7.32	33.395	3.57	26.13	75	7.70	32.13	25.09	290	0.26
240	6.97	33.655	2.71	26.39	100	7.84	32.20	25.12	287	0.34
					125	7.75	32.64	25.48	253	0.40
					150	7.55	33.17	25.92	211	0.46
					175	7.43	33.37	26.10	194	0.51
					200	7.32	33.39	26.13	192	0.56
CNAV OSHAWA; April 15, 1959; 1705 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.										82
0	8.20	29.708	7.74	23.12	0	8.20	29.71	23.12	476	0.00
10	7.51	30.877	6.34	24.13	10	7.51	30.88	24.13	379	0.04
40	7.62	31.459	6.88	24.57	20	7.18	31.56	24.71	324	0.08
100	7.84	32.234	5.68	25.15	30	7.22	31.75	24.86	311	0.11
150	7.55	33.162	4.03	25.92	50	7.66	31.62	24.70	326	0.17
200	7.32	33.405	3.35	26.14	75	7.75	31.97	24.96	302	0.25
240	6.94	33.658	2.82	26.39	100	7.84	32.23	25.15	284	0.33
					125	7.75	32.67	25.50	251	0.39
					150	7.55	33.16	25.92	212	0.45
					175	7.43	33.37	26.10	195	0.50
					200	7.32	33.41	26.14	191	0.55
CNAV OSHAWA; April 15, 1959; 1858 GCT; 52°15.5'N, 128°35.5'W; sounding, 130 fm; wind, missing; weather, missing; sea, missing.										83
0	8.80	29.731	7.90	23.05	0	8.80	29.73	23.05	482	0.00
10	7.40	30.802	6.51	24.09	10	7.40	30.80	24.09	384	0.04
40	7.67	31.489	6.86	24.59	20	6.74	31.45	24.68	327	0.08
100	7.84	32.289	6.21	25.19	30	6.83	31.68	24.85	311	0.11
150	7.55	33.187	3.99	25.94	50	7.73	31.68	24.73	323	0.18
200	7.32	33.414	3.49	26.15	75	7.83	32.05	25.01	297	0.25
240	6.96	33.660	2.73	26.39	100	7.84	32.29	25.19	280	0.33
					125	7.74	32.71	25.54	247	0.39
					150	7.55	33.19	25.94	210	0.45
					175	7.43	33.38	26.11	194	0.50
					200	7.32	33.41	26.15	190	0.55
CNAV OSHAWA; April 16, 1959; 0108 GCT; 52°25'N, 130°00'W; sounding, 145 fm; wind, 340°, 20 kt; weather, partly cloudy; sea, moderate.										84
0	7.70	31.652	6.97	24.71	0	7.70	31.65	24.71	324	0.00
2	7.68	31.605	6.98	24.68	10	7.67	31.61	24.68	327	0.03
6	7.68	31.600	6.99	24.68	20	7.65	31.70	24.76	320	0.06
9	7.67	31.603	6.97	24.68	30	7.60	31.83	24.87	309	0.10
19	7.65	31.691	6.98	24.75	50	7.54	32.03	25.03	294	0.16
38	7.54	31.968	6.92	24.98	75	7.67	32.15	25.11	288	0.23
57	7.57	32.026	6.80	25.02	100	7.66	32.42	25.32	268	0.30
76	7.68	32.159	6.76	25.11	125	7.64	32.86	25.67	235	0.36
95	7.67	32.350	6.09	25.26	150	7.66	33.25	25.97	206	0.42
118	7.63	32.744	5.13	25.58	175	7.35	33.51	26.22	183	0.47
142	7.70	33.146	4.29	25.88	200	6.75	33.64	26.41	166	0.51
184	7.17	33.574	3.32	26.29						
200	(6.75)a)	(33.645)a)	-	(26.41)						

a) Value extrapolated by three-point parabolic method.

POG

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
85	CNAV OSHAWA; April 16, 1959; 0531 GCT; 52°51'N, 129°45'W; sounding, 120 fm; wind, 310°, 10 kt; weather, overcast; sea, slight.									
0	7.30	30.667	7.08	24.00	0	7.30	30.67	24.00	392	0.00
2	7.20	30.628	7.11	23.98	10	7.22	30.64	23.99	393	0.04
6	7.18	30.624	7.08	23.98	20	7.20	31.05	24.31	363	0.08
10	7.22	30.643	7.08	23.99	30	7.23	31.27	24.48	347	0.11
20	7.20	31.045	6.75	24.31	50	7.33	31.58	24.71	325	0.18
39	7.29	31.319	6.76	24.51	75	7.35	32.35	25.31	268	0.26
59	7.36	31.846	6.27	24.91	100	7.22	32.94	25.79	223	0.32
78	7.34	32.458	5.46	25.40	125	7.07	33.17	25.99	204	0.37
98	7.23	32.906	4.57	25.76	150	6.99	33.29	26.10	195	0.42
122	7.08	33.152	4.00	25.98	175	6.92	33.36	26.16	189	0.47
147	7.00	33.278	3.65	26.09	200	6.94	33.35	26.15	190	0.52
171	6.93	33.355	3.56	26.16						
196	6.93	33.356	3.50	26.16						
200	(6.94)a)	(33.349)a)	-	(26.15)						
86	CNAV OSHAWA; April 16, 1959; 0642 GCT; 53°00'N, 129°55'W; sounding, 50 fm; wind, 310°, 10 kt; weather, cloudy; sea, slight.									
0	7.50	30.982	7.14	24.22	0	7.50	30.98	24.22	371	0.00
2	7.38	30.962	7.11	24.22	10	7.39	30.96	24.22	371	0.04
6	7.35	30.964	7.14	24.22	20	7.74	31.42	24.53	342	0.07
10	7.39	30.964	7.14	24.22	30	7.77	31.74	24.77	319	0.11
20	7.74	31.422	7.10	24.53	50	7.48	32.04	25.05	293	0.17
40	7.48	31.910	6.62	24.95	75	7.56	32.24	25.19	280	0.24
60	7.58	32.102	6.47	25.08						
80	7.53	32.280	6.12	25.23						
87	CNAV OSHAWA; April 16, 1959; 0801 GCT; 53°00'N, 130°15'W; sounding, 110 fm; wind, 250°, 10 kt; weather, intermittent slight rain; sea, slight.[b]									
0	7.90	30.971	7.02	24.15	0	7.90	30.97	24.15	377	0.00
2	7.31	30.954	7.00	24.22	10	7.33	30.95	24.22	371	0.05
6	7.30	30.956	6.95	24.22	20	7.49	31.48	24.61	334	0.07
10	7.33	30.954	6.95	24.22	30	7.54	31.75	24.82	314	0.11
20	7.49	31.484	6.95	24.61	50	7.47	31.85	24.90	307	0.17
40	7.48	31.767	6.75	24.83	75	7.51	32.01	25.02	296	0.24
60	7.46	31.896	6.79	24.94	100	7.55	32.33	25.27	272	0.32
80	7.54	32.046	6.57	25.04	125	7.73	32.81	25.62	240	0.38
100	7.55	32.334	5.94	25.27	150	7.22	33.30	26.07	197	0.44
125	7.73	32.811	3.56	25.62	175	6.77	33.64	26.40	166	0.48
150	7.22	33.295	2.27	26.07	200	6.38	33.83	26.61	147	0.52
200	6.38	33.835	-	26.61						
88	CNAV OSHAWA; April 16, 1959; 1206 GCT; 53°13'N, 131°14'W; sounding, 17 fm; wind, 320°, 10 kt; weather, squalls; sea, calm.[c]									
0	7.30	31.991	8.05	25.03	0	7.30	31.99	25.03	293	0.00
2	7.62	31.977	8.11	24.98	10	7.63	31.98	24.98	299	0.03
6	7.62	31.983	8.11	24.98	20	7.63	31.98	24.98	299	0.06
10	7.63	31.977	8.08	24.98	30	7.61	31.98	24.98	299	0.09
20	7.63	31.979	8.08	24.98						
30	7.61	31.978	8.06	24.98						
89	CNAV OSHAWA; April 16, 1959; 1316 GCT; 53°15'N, 131°28'W; sounding, 13 fm; wind, 320°, 5 kt; weather, drizzle; sea, calm.									
0	7.60	31.972	8.30	24.98	0	7.60	31.97	24.98	299	0.00
2	7.62	31.967	8.37	24.97	10	7.64	31.97	24.97	300	0.03
6	7.63	31.974	8.37	24.98	20	7.65	31.97	24.97	300	0.06
10	7.64	31.971	8.31	24.97						
22	7.65	31.974	8.36	24.97						

a) Value extrapolated by three-point parabolic method.

b) The following nitrate values were obtained for this station: 0 m, 17.3; 6, 16.6; 10, 16.2; 20, 15.9; 60, 15.2; 200, 34.6 µg at/L.

c) The following nitrate values were obtained for this station: 0 m, 4.7; 6, 5.0; 10, 5.1; 20, 5.3; 30, 4.7 µg at/L.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

90 CNAV OSHAWA; April 16, 1959; 1406 GCT; 53°15'N, 131°37.5'W; sounding, 10 fm; wind, 180°, 5 kt; weather, cloudy; sea, calm.

0	7.50	31.691	8.24	24.77	0	7.50	31.69	24.77	318	0.00
2	7.38	31.682	8.40	24.78	10	7.55	31.88	24.91	305	0.03
6	7.38	31.689	8.39	24.79	20	7.63	31.83	24.86	310	0.06
10	7.55	31.882	8.41	24.91						
20	7.63	31.832	8.39	24.86						

91 CNAV OSHAWA; April 16, 1959; 1715 GCT; 53°38'N, 130°53.5'W; sounding, 25 fm; wind, 150°, 5 kt; weather, moderate rain; sea, slight.

0	7.30	31.334	7.17	24.52	0	7.30	31.33	24.52	342	0.00
2	7.28	31.341	7.15	24.53	10	7.38	31.69	24.79	317	0.03
6	7.30	31.345	7.17	24.53	20	7.38	31.72	24.81	315	0.06
10	7.38	31.692	7.14	24.79	30	7.38	31.75	24.83	313	0.10
20	7.38	31.721	6.56	24.81						
40	7.37	31.774	6.81	24.85						

92 CNAV OSHAWA; April 16, 1959; 1827 GCT; 53°38'N, 130°44.5'W; sounding, 80 fm; wind, 170°, 10 kt; weather, intermittent slight rain; sea, slight.[a)]

0	7.10	31.004	7.07	24.29	0	7.10	31.00	24.29	365	0.00
2	7.10	30.999	7.09	24.28	10	7.13	31.02	24.30	364	0.04
5	7.14	31.000	7.09	24.28	20	7.31	31.38	24.55	339	0.07
9	7.13	31.008	7.13	24.29	30	7.39	31.60	24.72	324	0.10
18	7.28	31.323	7.01	24.51	50	7.42	31.77	24.85	312	0.17
36	7.40	31.681	6.97	24.78	75	7.27	31.86	24.94	304	0.25
54	7.41	31.772	6.96	24.85	100	7.31	32.05	25.08	290	0.32
72	7.28	31.854	6.58	24.93	125	7.20	32.82	25.70	232	0.39
91	7.32	31.910	6.52	24.97						
122	7.22	32.696	4.73	25.60						
125	(7.20)b)	(32.818)b)	-	(25.70)						

93 CNAV OSHAWA; April 16, 1959; 1920 GCT; 53°37.5'N, 130°37'W; sounding, 30 fm; wind, 170°, 5 kt; weather, intermittent slight rain; sea, slight.

0	7.20	30.906	7.12	24.20	0	7.20	30.91	24.20	373	0.00
2	7.18	30.894	7.12	24.19	10	7.18	31.07	24.33	361	0.04
6	7.18	30.899	7.12	24.19	20	7.18	31.53	24.69	326	0.07
10	7.18	31.069	7.03	24.33	30	7.20	31.96	25.03	294	0.10
19	7.18	31.488	6.90	24.66	50	7.30	31.78	24.87	310	0.16
39	7.22	32.321	6.53	25.30						
48	7.28	31.928	6.26	24.99						
50	(7.30)b)	(31.776)b)	-	(24.87)						

94 CNAV OSHAWA; April 16, 1959; 2128 GCT; 53°55.5'N, 130°58.5'W; sounding, 40 fm; wind, 140°, 10 kt; weather, drizzle; sea, slight.

0	7.30	31.298	7.22	24.49	0	7.30	31.30	24.49	345	0.00
2	7.30	31.296	7.22	24.49	10	7.30	31.30	24.49	345	0.04
6	7.32	31.298	7.24	24.49	20	7.32	31.37	24.54	341	0.07
10	7.30	31.302	7.22	24.49	30	7.29	31.49	24.64	331	0.10
19	7.32	31.357	7.20	24.53	50	7.19	31.71	24.83	314	0.17
39	7.21	31.651	6.85	24.78	75	7.31	32.00	25.04	294	0.24
58	7.20	31.707	6.93	24.82						
68	7.25	31.853	6.71	24.93						
75	(7.31)b)	(32.003)b)	-	(25.04)						

95 CNAV OSHAWA; April 16, 1959; 2335 GCT; 54°16'N, 131°08'W; sounding, 11 fm; wind, 140°, 8 kt; weather, cloudy; sea, slight.

0	6.90	31.908	7.16	25.02	0	6.90	31.91	25.02	294	0.00
2	6.77	31.890	7.18	25.03	10	6.66	31.94	25.08	289	0.03
6	6.75	31.898	7.21	25.03	20	6.59	32.00	25.13	284	0.06
10	6.66	31.941	7.13	25.08						
25	6.64	32.000	7.01	25.13						

a) The following nitrate values were obtained for this station: 0 m, 16.2; 5, 16.1; 9, 16.6; 18, 15.0; 54, 14.4; 91, 23.7 µg at/L.

b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
96	CNAV OSHAWA; April 17, 1959; 0014 GCT; 54°16.5'N, 131°01'W; sounding, 65 fm; wind, 140°, 5 kt; weather, cloudy; sea, slight.									
0	6.30	31.662	7.66	24.91	0	6.30	31.66	24.91	306	0.00
2	7.14	31.630	7.66	24.77	10	7.09	31.65	24.79	316	0.03
6	7.16	31.631	7.66	24.77	20	6.86	31.91	25.03	294	0.06
10	7.09	31.650	7.66	24.79	30	6.78	32.00	25.11	287	0.09
19	6.88	31.895	7.44	25.01	50	6.71	31.97	25.09	288	0.15
38	6.82	31.931	7.31	25.05	75	6.48	32.08	25.21	277	0.22
57	6.62	31.996	7.04	25.13	100	6.40	32.36	25.44	256	0.29
76	6.47	32.088	6.59	25.22						
109	6.41	32.506	5.30	25.56						
97	CNAV OSHAWA; April 17, 1959; 0107 GCT; 54°19'N, 130°54'W; sounding, 115 fm; wind, 140°, 5 kt; weather, cloudy; sea, slight.									
0	7.60	31.386	7.25	24.52	0	7.60	31.39	24.52	342	0.00
2	7.34	31.332	7.29	24.51	10	7.30	31.33	24.52	342	0.03
6	7.32	31.330	7.30	24.51	20	7.24	31.40	24.58	337	0.07
10	7.30	31.335	7.32	24.52	30	7.19	31.45	24.63	333	0.10
20	7.24	31.399	7.26	24.58	50	7.09	31.58	24.74	322	0.17
40	7.16	31.494	7.06	24.66	75	6.98	31.78	24.91	306	0.25
59	7.02	31.677	6.88	24.83	100	6.72	32.07	25.17	282	0.32
79	6.98	31.800	6.80	24.93	125	6.64	32.21	25.29	270	0.39
99	6.73	32.056	6.52	25.16	150	6.60	32.24	25.32	268	0.46
124	6.64	32.207	6.14	25.29	175	6.60	32.27	25.35	266	0.52
148	6.60	32.234	6.04	25.32	200	6.56	32.29	25.37	264	0.59
173	6.60	32.269	5.92	25.35						
198	6.56	32.288	5.92	25.37						
200	(6.56)a)	(32.289)a)	-	(25.37)						
98	CNAV OSHAWA; April 18, 1959; 1538 GCT; 54°10'N, 130°32.5'W; sounding, 100 fm; wind, 140°, 3 kt; weather, cloudy; sea, calm.									
0	7.70	26.842	6.79	20.95	0	7.70	26.84	20.95	684	0.00
2	7.50	26.878	6.82	21.00	10	7.22	31.21	24.43	351	0.05
6	7.32	30.936	6.77	24.20	20	7.15	31.35	24.55	340	0.09
10	7.22	31.208	7.12	24.43	30	7.06	31.43	24.63	332	0.12
20	7.15	31.350	7.08	24.55	50	6.94	31.51	24.70	325	0.19
40	6.95	31.454	6.88	24.66	75	6.98	31.65	24.81	315	0.27
60	7.00	31.571	6.73	24.74	100	6.94	31.70	24.85	312	0.35
80	6.96	31.682	6.63	24.84	125	6.91	31.74	24.89	308	0.42
100	6.94	31.696	6.60	24.85	150	6.92	31.82	24.95	303	0.50
125	6.91	31.744	6.30	24.89	175	6.91	31.84	24.97	302	0.58
150	6.92	31.819	6.52	24.95						
180	6.91	31.838	6.48	24.97						
99	CNAV OSHAWA; April 18, 1959; 1719 GCT; 54°19.5'N, 130°37.5'W; sounding, 88 fm; wind, 150°, 2 kt; weather, cloudy; sea, calm.									
0	7.70	30.396	7.25	23.73	0	7.70	30.40	23.73	418	0.00
2	7.36	30.208	6.88	23.63	10	7.37	30.87	24.14	378	0.04
6	7.36	30.723	6.95	24.03	20	7.30	31.12	24.35	358	0.08
10	7.37	30.867	7.03	24.14	30	7.21	31.31	24.51	343	0.11
20	7.30	31.124	7.19	24.35	50	7.05	31.52	24.70	326	0.18
40	7.10	31.436	6.76	24.63	75	6.86	31.69	24.86	311	0.26
60	7.04	31.550	6.80	24.72	100	6.67	32.10	25.21	278	0.33
80	6.78	31.751	5.74	24.91	125	6.64	32.27	25.34	266	0.40
100	6.67	32.103	5.37	25.21	150	6.61	32.33	25.39	262	0.47
125	6.64	32.267	4.95	25.34						
160	6.60	32.320	4.92	25.39						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 18, 1959; 1925 GCT; 54°39'N, 130°39'W; sounding, 260 fm; wind, calm; weather, cloudy; sea, calm.										100
0	8.40	29.891	7.33	23.24	0	8.40	29.89	23.24	465	0.00
2	7.38	29.799	7.31	23.31	10	6.24	30.70	24.15	378	0.04
6	6.54	30.353	6.84	23.85	20	6.51	30.99	24.35	359	0.08
10	6.24	30.696	6.43	24.15	30	6.66	31.26	24.54	340	0.11
20	6.51	30.986	6.70	24.35	50	6.61	31.72	24.91	305	0.18
40	6.68	31.510	6.46	24.74	75	6.48	32.17	25.28	271	0.25
60	6.44	31.905	5.38	25.08	100	6.62	32.38	25.43	257	0.32
80	6.54	32.246	4.63	25.33	125	6.58	32.48	25.52	249	0.38
100	6.62	32.378	4.56	25.43	150	6.56	32.52	25.55	246	0.44
125	6.58	32.483	4.68	25.52	175	6.58	32.58	25.59	243	0.51
150	6.56	32.520	4.56	25.55	200	6.55	32.61	25.62	240	0.57
175	6.58	32.576	4.53	25.59	250	6.59	32.65	25.64	239	0.69
200	6.55	32.606	4.57	25.62	300	6.44	32.75	25.75	229	0.80
250	6.59	32.646	4.56	25.64	400	6.40	32.88	25.85	221	1.03
299	6.44	32.752	4.61	25.75						
398	6.40	32.878	4.35	25.85						
472	6.41	32.873	4.36	25.84						
CNAV OSHAWA; April 18, 1959; 2053 GCT; 54°39'N, 130°47'W; sounding, 135 fm; wind, missing; weather, cloudy; sea, missing.										101
0	7.70	30.098	7.39	23.50	0	7.70	30.10	23.50	440	0.00
2	7.24	30.106	7.41	23.56	10	6.55	30.64	24.07	386	0.04
12	6.66	30.892	6.91	24.26	20	6.54	31.30	24.59	336	0.08
32	6.94	31.540	6.88	24.73	30	6.83	31.53	24.74	322	0.11
52	6.80	31.689	6.52	24.86	50	6.83	31.70	24.87	310	0.17
72	6.65	32.103	5.68	25.21	75	6.64	32.15	25.25	274	0.25
97	6.59	32.360	5.12	25.42	100	6.58	32.39	25.44	256	0.32
122	6.50	32.545	4.75	25.57	125	6.49	32.56	25.59	242	0.38
202	6.39	32.801	4.53	25.79	150	6.43	32.69	25.70	232	0.44
					175	6.40	32.77	25.77	226	0.49
					200	6.39	32.80	25.79	224	0.55
CNAV OSHAWA; April 18, 1959; 2208 GCT; 54°44'N, 130°51.5'W; sounding, 135 fm; wind, 270°, 2 kt; weather, cloudy; sea, calm.										102
0	7.60	30.115	8.15	23.52	0	7.60	30.11	23.52	437	0.00
2	7.20	30.089	8.09	23.56	10	6.78	30.18	23.68	423	0.04
6	7.08	30.109	8.17	23.59	20	6.48	30.84	24.24	369	0.08
10	6.78	30.178	7.66	23.68	30	6.45	31.22	24.54	341	0.12
20	6.48	30.842	6.83	24.24	50	6.74	31.55	24.76	320	0.18
40	6.70	31.314	6.69	24.58	75	6.67	31.99	25.12	286	0.26
60	(6.75)a)	31.788	6.15	(24.95)	100	6.58	32.30	25.37	262	0.33
80	6.62	32.034	5.65	25.16	125	6.55	32.49	25.52	248	0.40
100	6.58	32.299	5.14	25.37	150	6.51	32.52	25.55	246	0.46
125	6.55	32.487	4.81	25.52	175	6.48	32.58	25.61	241	0.52
150	6.51	32.516	4.77	25.55	200	6.46	32.68	25.69	234	0.58
200	6.46	32.682	4.61	25.69						
245	6.38	32.824	4.46	25.81						
CNAV OSHAWA; April 18, 1959; 2311 GCT; 54°48'N, 131°00'W; sounding, 50 fm; wind, 270°, 5 kt; weather, overcast; sea, calm.										103
0	7.30	29.249	10.16	22.88	0	7.30	29.25	22.88	498	0.00
2	7.17	29.124	10.38	22.80	10	6.52	30.11	23.65	425	0.05
6	7.08	29.670	9.06	23.24	20	6.23	30.54	24.03	389	0.09
10	6.52	30.105	7.40	23.65	30	6.17	30.92	24.34	360	0.12
20	6.23	30.537	6.88	24.03	50	6.40	31.52	24.78	318	0.19
40	6.34	31.268	6.19	24.59	75	6.54	31.96	25.11	287	0.27
60	6.46	31.703	6.02	24.92						
85	6.58	32.106	5.79	25.22						

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
104	CNAV OSHAWA; April 19, 1959; 0035 GCT; 54°45.5'N, 131°18.5'W; sounding, 85 fm; wind, 180°, 2 kt; weather, partly cloudy; sea, calm.									
0	7.10	29.892	9.13	23.41	0	7.10	29.89	23.41	448	0.00
2	6.66	29.852	8.79	23.44	10	6.53	30.24	23.76	415	0.04
6	6.65	30.044	8.46	23.59	20	6.30	30.66	24.11	381	0.08
10	6.53	30.238	8.06	23.76	30	6.27	30.96	24.35	358	0.12
20	6.30	30.656	6.86	24.11	50	6.71	31.38	24.63	332	0.19
40	6.43	31.138	6.67	24.48	75	7.18	31.79	24.89	308	0.27
60	7.13	31.622	7.12	24.77	100	6.60	32.18	25.28	271	0.34
80	7.10	31.806	6.93	24.92	125	6.49	32.42	25.48	252	0.41
100	6.60	32.183	5.83	25.28	150	6.37	32.71	25.72	230	0.47
125	6.49	32.425	5.13	25.48						
155	6.35	32.774	4.47	25.77						
105	CNAV OSHAWA; April 19, 1959; 0220 GCT; 54°43.5'N, 131°42'W; sounding, 240 fm; wind, 140°, 2 kt; weather, partly cloudy; sea, calm.									
0	7.40	29.966	11.38	23.43	0	7.40	29.97	23.43	446	0.00
2	7.17	29.932	10.92	23.44	10	6.68	30.20	23.71	420	0.04
6	7.00	29.936	10.68	23.46	20	6.62	30.89	24.26	368	0.08
10	6.68	30.204	8.47	23.71	30	6.62	31.27	24.56	339	0.12
20	6.62	30.886	6.86	24.26	50	6.60	31.52	24.76	320	0.18
40	6.69	31.371	6.74	24.63	75	6.39	31.89	25.07	291	0.26
60	6.42	31.616	6.18	24.85	100	6.40	32.57	25.61	240	0.33
80	6.42	31.991	5.41	25.15	125	6.28	33.18	26.11	193	0.38
100	6.40	32.574	4.23	25.61	150	6.20	33.55	26.41	165	0.43
125	6.28	33.183	3.74	26.11	175	6.15	33.68	26.51	155	0.47
150	6.20	(33.552)a)	3.14	(26.41)	200	6.12	33.57	26.43	163	0.51
200	6.12	33.571	3.14	26.43	250	6.10	33.63	26.48	159	0.59
250	6.10	33.629	3.08	26.48	300	6.10	33.76	26.58	150	0.67
300	6.10	33.760	2.91	26.58	400	5.90	33.86	26.69	141	0.81
430	5.79	33.850	2.79	26.69						
106	CNAV OSHAWA; April 19, 1959; 0332 GCT; 54°42'N, 131°53.5'W; sounding, 200 fm; wind, 240°, 10 kt; weather, cloudy; sea, calm.									
0	7.20	30.329	7.68	23.74	0	7.20	30.33	23.74	416	0.00
2	6.97	30.293	7.37	23.75	10	6.96	30.28	23.74	417	0.04
6	6.97	30.289	7.38	23.74	20	6.56	30.41	23.89	403	0.08
10	6.96	30.283	7.69	23.74	30	6.28	30.65	24.11	382	0.12
20	6.56	30.406	7.72	23.89	50	6.38	31.37	24.66	329	0.19
40	6.11	31.013	6.75	24.42	75	6.82	31.88	25.01	297	0.27
60	6.97	31.756	6.74	24.89	100	6.50	32.15	25.27	273	0.34
80	6.62	31.835	6.15	25.00	125	6.37	32.79	25.79	224	0.41
99	6.51	32.132	5.91	25.25	150	6.25	33.16	26.09	194	0.46
124	6.38	32.772	4.82	25.77	175	6.20	33.37	26.26	179	0.51
148	6.26	33.141	3.85	26.07	200	6.21	33.41	26.29	176	0.55
198	6.21	33.402	2.96	26.29	250	6.13	33.55	26.41	166	0.64
247	6.13	33.538	2.98	26.40	300	6.13	33.65	26.49	158	0.72
296	6.14	33.645	2.73	26.49						
353	5.80	33.738	2.73	26.60						

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 19, 1959; 0554 GCT; 54°25'N, 132°12'W; sounding, 180 fm; wind, 250°, 3 kt; weather, clear; sea, calm.										107
0	7.30	30.750	7.47	24.06	0	7.30	30.75	24.06	386	0.00
2	7.20	30.700	7.40	24.04	10	6.67	30.95	24.30	363	0.04
6	6.76	30.804	7.44	24.17	20	6.71	31.28	24.55	340	0.07
10	6.67	30.954	7.25	24.30	30	6.71	31.43	24.67	328	0.11
20	6.71	31.276	6.83	24.55	50	6.70	31.55	24.77	320	0.17
39	6.68	31.426	7.03	24.67	75	6.68	31.82	24.98	300	0.25
59	6.74	31.669	6.91	24.86	100	6.46	32.06	25.20	278	0.32
78	6.66	31.838	6.49	25.00	125	6.41	32.34	25.43	257	0.39
98	6.47	32.044	6.42	25.18	150	6.33	33.02	25.97	206	0.45
123	6.42	32.305	5.90	25.40	175	6.31	33.45	26.31	174	0.50
147	6.34	32.958	4.17	25.92	200	6.30	33.68	26.49	158	0.54
194	6.32	33.625	3.22	26.45	250	6.04	33.85	26.66	142	0.61
242	6.08	33.826	2.76	26.64	300	5.83	33.90	26.73	136	0.68
312	5.78	33.892	2.52	26.73						
CNAV OSHAWA; April 19, 1959; 0736 GCT; 54°10.5'N, 132°28'W; sounding, 40 fm; wind, calm; weather, overcast; sea, calm.										108
0	7.80	30.712	10.50	23.96	0	7.80	30.71	23.96	395	0.00
2	7.64	30.694	10.55	23.97	10	7.14	30.72	24.06	387	0.04
6	7.27	30.655	9.76	23.99	20	6.94	31.56	24.74	321	0.08
10	7.14	30.718	8.85	24.06	30	6.77	31.97	25.09	289	0.11
20	6.94	31.558	7.26	24.74	50	6.58	32.04	25.17	281	0.16
40	6.64	31.950	6.56	25.09	75	6.55	32.23	25.32	267	0.23
60	6.58	32.072	6.40	25.19						
70	6.56	32.172	6.18	25.27						
75	(6.55)a)	(32.232)a)	-	(25.32)						
CNAV OSHAWA; April 19, 1959; 0947 GCT; 54°18.5'N, 133°03.5'W; sounding, 245 fm; wind, 220°, 5 kt; weather, overcast; sea, calm.										109
0	7.70	31.038	9.81	24.23	0	7.70	31.04	24.23	370	0.00
2	7.63	31.026	9.94	24.23	10	6.95	31.45	24.66	330	0.04
6	7.51	31.130	9.69	24.33	20	6.54	31.94	25.10	288	0.07
10	6.95	31.449	8.00	24.66	30	6.38	32.16	25.29	270	0.09
20	6.54	31.942	6.87	25.10	50	6.42	32.25	25.35	264	0.15
40	6.46	32.093	6.25	25.22	75	6.37	32.64	25.66	234	0.21
59	6.38	32.432	5.67	25.50	100	6.38	32.77	25.76	225	0.27
79	6.37	32.674	4.95	25.69	125	6.35	32.87	25.85	217	0.32
99	6.38	32.762	4.66	25.76	150	6.24	33.30	26.20	185	0.38
123	6.36	32.851	4.58	25.83	175	6.22	33.56	26.41	165	0.42
148	6.25	33.268	3.72	26.18	200	6.25	33.69	26.51	156	0.46
197	6.26	33.679	3.16	26.50	250	5.92	33.80	26.64	144	0.54
247	5.94	33.798	2.89	26.63	300	5.64	33.91	26.76	134	0.60
296	5.66	33.900	2.61	26.75	400	5.25	33.97	26.85	125	0.74
436	5.16	33.947	2.02	26.84						
CNAV OSHAWA; April 19, 1959; 1104 GCT; 54°28.5'N, 133°03.5'W; sounding, 40 fm; wind, 220°, 5 kt; weather, overcast; sea, calm.										110
0	7.30	30.875	9.15	24.16	0	7.30	30.88	24.16	377	0.00
2	7.17	30.846	9.23	24.15	10	7.06	31.11	24.37	356	0.04
6	7.23	30.891	9.10	24.18	20	6.82	31.46	24.68	327	0.07
10	7.06	31.108	7.94	24.37	30	6.67	31.78	24.95	302	0.10
20	6.82	31.461	7.20	24.68	50	6.60	32.25	25.33	266	0.16
40	6.61	32.071	6.73	25.19						
65	6.72	32.361	6.32	25.40						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

111 CNAV OSHAWA; April 19, 1959; 1209 GCT; 54°34'N, 132°59'W; sounding, 210 fm; wind, 220°, 5 kt; weather, overcast; sea, calm.

0	7.20	31.019	8.68	24.29	0	7.20	31.02	24.29	365	0.00
2	7.10	31.042	9.20	24.32	10	7.16	31.35	24.55	340	0.04
6	7.14	31.260	6.94	24.48	20	6.88	31.63	24.81	315	0.07
10	7.16	31.347	7.72	24.55	30	6.69	31.82	24.98	298	0.10
20	6.88	31.630	7.14	24.81	50	6.50	32.03	25.17	281	0.16
40	6.58	31.931	6.58	25.08	75	6.40	32.27	25.37	262	0.23
60	6.46	32.104	6.19	25.23	100	6.38	32.87	25.85	217	0.29
80	6.38	32.338	5.44	25.43	125	6.37	32.97	25.92	210	0.34
100	6.38	32.872	4.63	25.85	150	6.87	33.44	26.23	182	0.39
125	6.37	32.967	4.48	25.92	175	6.95	33.67	26.40	166	0.43
150	6.87	33.437	3.96	26.23	200	6.60	33.68	26.45	161	0.47
200	6.60	33.677	3.50	26.45	250	6.24	33.78	26.58	150	0.55
250	6.24	33.782	3.16	26.58	300	5.77	33.82	26.67	141	0.63
299	5.78	33.822	2.86	26.67						
358	5.54	33.862	2.48	26.73						

112 CNAV OSHAWA; April 19, 1959; 1322 GCT; 54°39'N, 132°53'W; sounding, 95 fm; wind, 180°, 2 kt; weather, overcast; sea, calm.

0	6.95	31.078	7.70	24.36	0	6.95	31.08	24.36	357	0.00
2	6.90	31.064	7.53	24.36	10	6.96	31.19	24.45	349	0.04
6	6.96	31.158	7.34	24.43	20	6.85	31.28	24.53	341	0.07
10	6.96	31.195	7.23	24.45	30	6.82	31.42	24.65	330	0.10
19	6.86	31.266	7.20	24.52	50	6.75	31.74	24.91	306	0.17
39	6.86	31.603	6.88	24.79	75	6.57	31.93	25.09	289	0.24
58	6.63	31.826	6.57	24.99	100	6.77	32.18	25.26	274	0.31
78	6.57	31.943	6.48	25.09	125	6.37	32.58	25.62	239	0.38
97	6.78	32.146	6.69	25.23	150	6.42	33.09	26.02	202	0.43
122	6.39	32.527	5.26	25.57						
161	6.56	33.356	4.02	26.21						

113 CNAV OSHAWA; April 19, 1959; 1537 GCT; 55°00'N, 133°14.5'W; sounding, 40 fm; wind, 140°, 10 kt; weather, drizzle; sea, calm.

0	7.20	31.640	7.17	24.77	0	7.20	31.64	24.77	318	0.00
2	6.90	31.624	7.16	24.80	10	6.90	31.67	24.84	312	0.03
6	6.93	31.661	7.17	24.82	20	6.74	31.66	24.85	311	0.06
10	6.90	31.672	7.20	24.84	30	6.58	31.70	24.90	307	0.09
20	6.74	31.660	7.17	24.85	50	6.37	31.83	25.03	294	0.16
40	6.42	31.782	6.84	24.98	75	6.40	31.93	25.10	288	0.23
60	6.40	31.880	6.75	25.06						
72	6.40	31.918	6.68	25.09						
75	(6.40)a)	(31.925)a)	-	(25.10)						

114 CNAV OSHAWA; April 19, 1959; 1705 GCT; 55°00'N, 133°39'W; sounding, 50 fm; wind, 160°, 5 kt; weather, overcast; sea, slight.

0	6.90	31.692	7.23	24.85	0	6.90	31.69	24.85	311	0.00
2	6.70	31.601	7.23	24.81	10	6.73	31.62	24.82	314	0.03
6	6.74	31.613	7.20	24.81	20	6.64	31.70	24.90	307	0.06
10	6.73	31.620	7.25	24.82	30	6.53	31.77	24.97	300	0.09
20	6.64	31.704	7.14	24.90	50	6.38	31.88	25.06	291	0.15
40	6.40	31.832	6.90	25.03	75	6.41	32.00	25.16	282	0.22
59	6.42	31.906	6.78	25.08	100	6.47	31.98	25.14	285	0.30
79	6.40	32.027	6.65	25.18						
89	6.42	32.027	6.63	25.18						
100	(6.47)a)	(31.980)a)	-	(25.14)						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

CNAV OSHAWA; April 19, 1959; 1833 GCT; 55°00.5'N, 133°59.5'W; sounding, 82 fm; wind, 160°, 15 kt; weather, drizzle; sea, slight. 115

0	6.90	31.469	7.40	24.68	0	6.90	31.47	24.68	327	0.00
2	6.65	31.432	7.36	24.68	10	6.66	31.47	24.71	324	0.03
6	6.68	31.425	7.34	24.67	20	6.56	31.79	24.97	300	0.06
9	6.67	31.455	7.30	24.70	30	6.45	31.88	25.06	291	0.09
19	6.57	31.766	7.17	24.95	50	6.32	31.85	25.05	292	0.15
38	6.35	31.814	6.84	25.02	75	6.38	32.01	25.17	281	0.22
57	6.35	31.871	6.80	25.06	100	6.53	32.24	25.33	266	0.29
76	6.38	32.024	6.83	25.18	125	6.63	32.51	25.53	248	0.36
95	6.50	32.190	6.58	25.30						
118	6.61	32.430	5.66	25.47						
137	6.64	32.662	5.61	25.65						

CNAV OSHAWA; April 19, 1959; 2318 GCT; 55°00'N, 135°00'W; sounding, 1200 fm; wind, 200°, 10 kt; weather, light fog; sea, slight. 116

0	7.20	31.434	7.41	24.61	0	7.20	31.43	24.61	334	0.00
10	6.89	31.427	7.30	24.65	10	6.89	31.43	24.65	330	0.03
20	6.85	31.450	6.95	24.67	20	6.85	31.45	24.67	328	0.07
29	6.63	31.863	6.69	25.02	30	6.61	31.90	25.05	292	0.10
48	6.60	32.084	6.16	25.20	50	6.60	32.11	25.22	277	0.16
72	6.70	32.314	6.40	25.37	75	6.70	32.34	25.39	261	0.22
96	6.68	32.490	6.62	25.51	100	6.66	32.52	25.54	247	0.29
120	6.53	32.707	5.59	25.70	125	6.53	32.76	25.74	228	0.35
144	6.66	33.008	4.93	25.92	150	6.64	33.12	26.01	203	0.40
168	6.44	33.536	3.94	26.36	175	6.36	33.62	26.44	162	0.45
192	6.14	33.680	3.33	26.51	200	5.99	33.71	26.56	151	0.49
241	4.86	33.736	4.22	26.71	250	4.74	33.75	26.74	134	0.56
290	4.66	33.845	4.31	26.82	300	4.64	33.86	26.84	125	0.62
378	4.66	33.985	1.78	26.93	400	4.63	34.01	26.96	115	0.74
472	4.44	34.082	0.94	27.03	500	4.35	34.10	27.06	106	0.86
566	4.10	34.148	1.13	27.12	600	4.00	34.17	27.15	98	0.96
755	3.64	34.252	0.46	27.25	700	3.74	34.23	27.22	92	1.05

CNAV OSHAWA; April 20, 1959; 0326 GCT; 55°02'N, 136°05'W; sounding, 1420 fm; wind, 180°, 10 kt; weather, fog in patches; sea, slight. 117

0	7.30	32.460	6.71	25.40	0	7.30	32.46	25.40	258	0.00
10	6.85	32.452	6.10	25.46	10	6.85	32.45	25.46	253	0.03
20	6.72	32.454	6.52	25.47	20	6.72	32.45	25.47	252	0.05
30	6.66	32.495	6.79	25.52	30	6.66	32.50	25.52	248	0.08
49	6.48	32.528	6.66	25.56	50	6.47	32.53	25.57	243	0.13
74	6.22	32.746	6.65	25.77	75	6.23	32.76	25.78	224	0.18
98	6.88	33.096	5.30	25.96	100	6.90	33.13	25.98	205	0.24
123	6.65	33.470	4.28	26.28	125	6.65	33.50	26.30	174	0.29
148	6.82	33.734	3.37	26.47	150	6.80	33.75	26.48	158	0.33
172	6.18	33.807	3.52	26.61	175	6.13	33.81	26.62	145	0.37
196	5.93	33.844	3.36	26.67	200	5.89	33.85	26.68	140	0.40
245	5.35	33.894	2.95	26.78	250	5.32	33.90	26.79	130	0.47
296	5.34	33.968	2.00	26.84	300	5.33	33.97	26.84	125	0.53
368	4.80	33.964	1.59	26.90	400	4.65	33.99	26.94	116	0.66
452	4.53	34.086	0.95	27.03	500	4.38	34.12	27.07	105	0.77
558	4.21	34.136	0.67	27.10	600	4.09	34.16	27.13	100	0.87
740	3.72	34.253	0.48	27.24	700	3.82	34.22	27.21	93	0.97
934	3.30	34.334	0.39	27.35	800	3.58	34.28	27.28	86	1.06
1126	2.89	34.408	0.64	27.44	1000	3.16	34.36	27.38	77	1.22
1415	2.49	34.466	0.57	27.53	1200	2.76	34.43	27.47	69	1.37

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
118	CNAV OSHAWA; April 20, 1959; 0047 GCT; 54°01'N, 136°02'W; sounding, missing; wind, 160°, 7 kt; weather, light fog; sea, missing.									
0	7.60	32.360	7.28	25.28	0	7.60	32.36	25.28	270	0.00
10	7.45	32.350	7.22	25.30	10	7.45	32.35	25.30	269	0.03
20	7.45	32.351	7.04	25.30	20	7.45	32.35	25.30	269	0.05
30	7.42	32.370	7.20	25.32	30	7.42	32.37	25.32	267	0.08
49	7.16	32.435	7.09	25.40	50	7.15	32.44	25.41	259	0.13
74	7.02	32.568	6.66	25.52	75	7.03	32.58	25.53	247	0.20
99	7.50	33.066	4.77	25.85	100	7.50	33.08	25.86	216	0.26
123	7.01	33.418	4.18	26.19	125	6.97	33.44	26.21	183	0.31
148	6.56	33.544	4.13	26.35	150	6.54	33.56	26.37	169	0.35
172	6.58	33.720	3.52	26.49	175	6.55	33.73	26.50	156	0.39
195	6.22	33.785	3.44	26.59	200	6.15	33.80	26.61	147	0.43
244	5.55	33.850	3.24	26.72	250	5.48	33.86	26.73	135	0.50
293	5.07	33.887	3.24	26.81	300	5.03	33.89	26.82	127	0.57
378	5.07	33.976	1.72	26.88	400	5.00	34.00	26.90	120	0.69
472	4.56	34.070	1.04	27.01	500	4.44	34.09	27.04	108	0.81
564	4.22	34.128	0.73	27.09	600	4.11	34.15	27.12	100	0.91
750	3.80	34.258	0.59	27.24	700	3.88	34.22	27.20	94	1.01
935	3.38	34.340	1.08	27.35	800	3.69	34.28	27.27	88	1.10
1120	3.01	34.395	0.60	27.42	1000	3.24	34.36	27.38	78	1.27
1404	2.54	34.477	0.55	27.53	1200	2.87	34.42	27.46	71	1.42
119	CNAV OSHAWA; April 20, 1959; 1422 GCT; 54°00'N, 135°01.5'W; sounding, missing; wind, 180°, 5 kt; weather, fog in patches; sea, calm.									
0	7.20	32.337	7.39	25.32	0	7.20	32.34	25.32	266	0.00
10	7.10	32.328	7.41	25.33	10	7.10	32.33	25.33	266	0.03
20	7.10	32.330	7.20	25.33	20	7.10	32.33	25.33	266	0.05
30	6.92	32.340	7.12	25.36	30	6.92	32.34	25.36	263	0.08
50	6.86	32.346	7.19	25.37	50	6.86	32.35	25.37	262	0.13
74	6.76	32.470	6.86	25.48	75	6.75	32.48	25.49	251	0.20
99	6.58	32.755	6.30	25.73	100	6.59	32.77	25.74	227	0.26
124	7.29	33.272	4.08	26.04	125	7.30	33.29	26.05	199	0.31
149	7.26	33.538	3.56	26.25	150	7.25	33.55	26.26	179	0.36
173	7.04	33.690	3.25	26.40	175	7.02	33.70	26.41	165	0.40
198	6.85	33.770	2.94	26.49	200	6.84	33.78	26.50	157	0.44
248	6.50	33.875	2.79	26.62	250	6.48	33.88	26.63	146	0.52
298	5.95	33.910	3.25	26.72	300	5.93	33.91	26.72	137	0.59
393	5.34	33.981	1.87	26.85	400	5.29	33.99	26.86	125	0.72
492	4.65	34.028	1.57	26.97	500	4.62	34.03	26.97	114	0.84
591	4.52	34.119	0.82	27.05	600	4.50	34.13	27.06	107	0.95
788	3.90	34.252	0.55	27.22	700	4.24	34.20	27.15	99	1.06
986	3.36	34.336	0.43	27.34	800	3.86	34.26	27.23	91	1.15
1180	2.94	34.400	0.84	27.43	1000	3.33	34.34	27.35	81	1.33
1480	2.42	34.496	0.68	27.56	1200	2.90	34.41	27.44	72	1.48
1500	(2.39)a)	(34.502)a)	-	(27.56)	1500	2.39	34.50	27.56	61	1.69

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

CNAV OSHAWA; April 20, 1959; 1740 GCT; 53°59'N, 134°03'W; sounding, 800 fm; wind, 200°, 2 kt; weather, cloudy; sea, missing. 120

0	7.50	32.024	7.36	25.03	0	7.50	32.02	25.03	294	0.00
10	7.15	32.209	7.33	25.23	10	7.15	32.21	25.23	275	0.03
20	7.06	32.361	7.25	25.36	20	7.06	32.36	25.36	263	0.06
30	6.86	32.389	7.05	25.41	30	6.86	32.39	25.41	258	0.08
49	6.64	32.521	6.83	25.54	50	6.63	32.53	25.55	245	0.13
74	6.38	32.765	6.55	25.76	75	6.37	32.77	25.77	224	0.19
98	6.21	32.955	5.88	25.93	100	6.22	32.98	25.95	207	0.25
123	6.50	33.356	4.30	26.21	125	6.50	33.38	26.23	181	0.30
148	6.26	33.642	3.32	26.47	150	6.24	33.66	26.48	158	0.34
172	6.06	33.738	3.11	26.57	175	6.04	33.75	26.58	148	0.38
196	5.97	33.848	2.93	26.67	200	5.95	33.86	26.68	139	0.41
244	5.49	33.905	2.51	26.77	250	5.44	33.91	26.78	130	0.48
293	5.17	33.939	2.13	26.84	300	5.13	33.94	26.85	125	0.54
377	4.66	34.006	1.47	26.95	400	4.55	34.03	26.98	113	0.66
472	4.26	34.088	0.99	27.06	500	4.19	34.11	27.08	104	0.77
568	4.11	34.154	0.80	27.12	600	4.04	34.17	27.15	98	0.88
763	3.56	34.269	0.57	27.27	700	3.77	34.23	27.22	91	0.97
962	3.24	34.349	0.53	27.37	800	3.48	34.29	27.29	85	1.06
1160	3.04	34.388	0.66	27.42	1000	3.19	34.36	27.38	78	1.22
1205	2.98	34.413	0.92	27.44	1200	2.99	34.41	27.44	73	1.38

CNAV OSHAWA; April 20, 1959; 2003 GCT; 53°58.5'N, 133°37'W; sounding, 800 fm; wind, 250°, 2 kt; weather, cloudy; sea, calm. 121

0	7.90	32.389	7.01	25.26	0	7.90	32.39	25.26	272	0.00
10	7.30	32.372	7.01	25.33	10	7.30	32.37	25.33	265	0.03
20	6.97	32.424	7.01	25.42	20	6.97	32.42	25.42	257	0.05
30	6.79	32.465	7.28	25.47	30	6.79	32.47	25.47	252	0.08
49	6.64	32.552	6.22	25.56	50	6.62	32.56	25.57	243	0.13
74	6.02	32.691	6.92	25.75	75	6.01	32.70	25.76	226	0.19
98	6.09	32.884	6.36	25.89	100	6.11	32.90	25.91	212	0.24
122	6.56	33.142	5.28	26.04	125	6.59	33.18	26.06	197	0.29
147	6.64	33.498	3.99	26.31	150	6.61	33.53	26.33	172	0.34
171	6.17	33.641	3.97	26.48	175	6.12	33.66	26.50	156	0.38
195	5.96	33.747	3.70	26.59	200	5.92	33.77	26.61	146	0.42
242	5.70	33.886	2.93	26.73	250	5.63	33.90	26.75	134	0.49
290	5.14	33.884	2.68	26.80	300	5.04	33.89	26.81	128	0.56
337	4.74	33.921	2.33	26.87						

CNAV OSHAWA; April 20, 1959; 2125 GCT; 54°00'N, 133°15'W; sounding, 25 fm; wind, 250°, 2 kt; weather, cloudy; sea, calm. 122

0	8.30	32.132	8.12	25.00	0	8.30	32.13	25.00	296	0.00
2	7.46	32.125	7.84	25.12	10	7.30	32.18	25.18	280	0.03
6	7.41	32.148	7.68	25.14	20	7.18	32.24	25.24	274	0.06
10	7.30	32.178	7.54	25.18	30	7.10	32.29	25.30	269	0.08
20	7.18	32.236	7.31	25.24						
40	7.05	32.350	6.34	25.35						

CNAV OSHAWA; April 21, 1959; 0110 GCT; 53°18'N, 132°50'W; sounding, 115 fm; wind, 320°, 15 kt; weather, partly cloudy; sea, slight. 123

0	8.10	32.186	7.48	25.07	0	8.10	32.19	25.07	290	0.00
2	7.73	32.175	7.47	25.12	10	7.65	32.17	25.13	285	0.03
6	7.68	32.184	7.63	25.13	20	7.14	32.24	25.25	273	0.06
9	7.67	32.174	7.42	25.13	30	6.96	32.31	25.33	265	0.08
19	7.17	32.231	7.42	25.24	50	6.99	32.42	25.42	258	0.14
38	7.04	32.390	6.92	25.38	75	6.96	32.55	25.52	248	0.20
56	6.98	32.422	6.77	25.42	100	6.97	32.82	25.73	229	0.26
75	6.96	32.554	6.46	25.52	125	7.02	33.02	25.88	215	0.32
94	6.96	32.769	5.87	25.69	150	6.83	33.45	26.24	181	0.37
117	7.04	32.914	5.42	25.79	175	6.63	33.70	26.47	160	0.41
141	6.89	33.324	4.30	26.14	200	6.41	33.83	26.59	148	0.45
188	6.52	33.782	3.08	26.55						
200	(6.41)a)	(33.826)a)	-	(26.59)						

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a) Value extrapolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
124	CNAV OSHAWA; April 21, 1959; 0220 GCT; 53°15.5'N, 133°02'W; sounding, 280 fm; wind, 320°, 20 kt; weather, partly cloudy; sea, slight.									
0	7.90	32.206	7.53	25.12	0	7.90	32.21	25.12	285	0.00
10	7.51	32.198	7.54	25.17	10	7.51	32.20	25.17	281	0.03
20	7.04	32.290	7.31	25.30	20	7.04	32.29	25.30	268	0.06
30	6.94	32.401	7.03	25.40	30	6.94	32.40	25.40	259	0.08
50	6.78	32.471	6.92	25.48	50	6.78	32.47	25.48	252	0.13
75	6.99	32.705	6.09	25.64	75	6.99	32.70	25.64	237	0.20
100	7.06	32.978	5.26	25.84	100	7.06	32.98	25.84	218	0.25
124	7.15	33.347	4.10	26.12	125	7.15	33.36	26.13	191	0.30
149	7.06	33.632	3.44	26.36	150	7.05	33.64	26.36	169	0.35
174	6.81	33.740	3.48	26.47	175	6.80	33.74	26.48	159	0.39
199	6.56	33.834	3.22	26.58	200	6.55	33.84	26.59	149	0.43
248	6.15	33.909	2.71	26.69	250	6.13	33.91	26.70	139	0.50
297	5.44	33.947	2.20	26.81	300	5.40	33.95	26.82	128	0.57
396	4.76	34.007	1.52	26.94	400	4.74	34.01	26.94	116	0.69
493	4.34	34.093	1.61	27.05	500	4.32	34.10	27.06	106	0.80
500	(4.32)a)	(34.100)a)	-	(27.06)						
125	CNAV OSHAWA; April 21, 1959; 0350 GCT; 53°10'N, 133°18'W; sounding, 1200 fm; wind, 320°, 20 kt; weather, fog; sea, slight.									
0	8.00	32.363	7.31	25.23	0	8.00	32.36	25.23	275	0.00
10	7.99	32.356	7.36	25.22	10	7.99	32.36	25.22	276	0.03
20	7.16	32.374	7.31	25.35	20	7.16	32.37	25.35	263	0.06
30	7.02	32.380	7.34	25.38	30	7.02	32.38	25.38	261	0.08
50	6.69	32.451	6.82	25.48	50	6.69	32.45	25.48	252	0.13
75	6.43	32.596	6.72	25.62	75	6.43	32.60	25.62	238	0.19
100	6.38	32.843	6.19	25.82	100	6.38	32.84	25.82	219	0.25
125	7.09	33.346	4.39	26.13	125	7.09	33.35	26.13	191	0.30
150	7.14	33.601	3.70	26.32	150	7.14	33.60	26.32	173	0.35
175	6.95	33.778	3.12	26.49	175	6.95	33.78	26.49	158	0.39
200	6.75	33.834	2.98	26.56	200	6.75	33.83	26.56	152	0.43
249	6.32	33.899	2.72	26.66	250	6.31	33.90	26.67	142	0.50
298	5.48	33.893	2.71	26.76	300	5.45	33.89	26.77	132	0.57
391	4.48	33.942	1.91	26.92	400	4.44	33.95	26.93	117	0.70
489	4.58	34.088	1.47	27.02	500	4.55	34.10	27.03	108	0.81
588	3.96	34.147	1.03	27.13	600	3.90	34.15	27.15	98	0.92
788	3.56	34.282	0.41	27.28	700	3.60	34.22	27.23	90	1.01
988	3.21	34.371	0.48	27.39	800	3.54	34.29	27.29	86	1.10
1188	2.82	34.428	0.50	27.47	1000	3.19	34.38	27.39	77	1.27
1488	2.12	34.506	2.02	27.59	1200	2.79	34.43	27.47	69	1.41
1500	(2.09)a)	(34.509)a)	-	(27.59)	1500	2.09	34.51	27.59	57	1.61
126	CNAV OSHAWA; April 21, 1959; 1409 GCT; 51°58'N, 130°56'W; sounding, 66 fm; wind, 320°, 15 kt; weather, clear; sea, calm.									
0	8.70	31.935	7.23	24.79	0	8.70	31.94	24.79	317	0.00
2	8.52	31.916	7.32	24.80	10	8.48	31.94	24.83	313	0.03
6	8.52	31.964	7.39	24.84	20	8.26	32.05	24.94	302	0.06
10	8.48	31.940	7.42	24.83	30	8.03	32.11	25.02	295	0.09
20	8.26	32.046	7.46	24.94	50	7.73	32.18	25.12	286	0.15
40	7.80	32.123	6.98	25.07	75	7.76	32.38	25.27	272	0.22
60	7.76	32.252	6.55	25.18	100	7.72	32.88	25.67	234	0.28
80	7.76	32.427	6.17	25.31	125	7.53	33.23	25.98	206	0.34
100	7.72	32.875	5.09	25.67						
120	7.58	33.180	4.32	25.93						
125	(7.53)a)	(33.234)a)	-	(25.98)						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; April 21, 1959; 1557 GCT; 52°00'N, 130°30'W; sounding, 194 fm; wind, 360°, 20 kt; weather, clear; sea, moderate.										127
0	7.70	31.908	7.73	24.91	0	7.70	31.91	24.91	305	0.00
2	8.61	31.901	7.74	24.78	10	8.44	31.94	24.83	313	0.03
6	8.65	31.900	7.66	24.77	20	8.15	32.13	25.03	294	0.06
9	8.49	31.927	7.28	24.81	30	7.94	32.26	25.16	282	0.09
19	8.18	32.118	7.15	25.01	50	7.76	32.40	25.30	269	0.15
38	7.83	32.319	6.69	25.22	75	7.78	32.81	25.61	240	0.21
56	7.76	32.436	6.41	25.32	100	7.49	33.26	26.00	203	0.27
75	7.78	32.806	5.46	25.61	125	7.30	33.42	26.16	189	0.32
94	7.54	33.183	4.44	25.94	150	6.99	33.66	26.39	167	0.36
117	7.39	33.342	4.10	26.08	175	6.76	33.75	26.49	157	0.40
140	7.08	33.598	3.50	26.33	200	6.31	33.88	26.65	142	0.44
164	6.92	33.695	3.16	26.42	250	5.73	33.95	26.78	131	0.51
188	6.49	33.837	2.63	26.59	300	5.13	34.02	26.91	119	0.57
235	5.92	33.925	2.36	26.74						
284	5.28	33.998	1.74	26.87						
334	4.92	34.070	1.39	26.97						
CNAV OSHAWA; April 21, 1959; 1838 GCT; 51°33'N, 130°17'W; sounding, 184 fm; wind, 330°, 10 kt; weather, clear; sea, slight.										128
0	8.80	32.095	7.22	24.90	0	8.80	32.09	24.90	306	0.00
8	8.78	32.063	7.32	24.88	10	8.73	32.08	24.90	307	0.03
21	8.16	32.332	7.30	25.18	20	8.23	32.30	25.14	283	0.06
44	7.52	32.469	6.83	25.38	30	7.84	32.44	25.31	268	0.09
66	7.54	32.506	6.88	25.41	50	7.46	32.49	25.40	259	0.14
87	7.60	33.073	5.13	25.84	75	7.56	32.69	25.54	246	0.20
107	7.88	33.674	3.42	26.27	100	7.76	33.46	26.12	192	0.26
128	7.30	33.748	3.34	26.41	125	7.44	33.77	26.41	164	0.30
174	6.75	33.889	3.03	26.60	150	6.91	33.82	26.52	154	0.34
220	6.18	33.909	2.73	26.69	175	6.74	33.89	26.60	147	0.38
266	5.75	33.941	2.30	26.77	200	6.43	33.92	26.66	141	0.42
313	5.24	33.980	1.85	26.86	250	5.88	33.93	26.74	134	0.49
					300	5.39	33.97	26.83	126	0.55
CNAV OSHAWA; April 21, 1959; 2216 GCT; 51°03'N, 129°32'W; sounding, 250 fm; wind, 350°, 15 kt; weather, partly cloudy; sea, slight.										129
0	9.60	31.656	8.34	24.43	0	9.60	31.66	24.43	351	0.00
10	8.72	31.648	8.20	24.56	10	8.72	31.65	24.56	338	0.04
24	8.28	32.078	8.16	24.96	20	8.31	31.90	24.82	314	0.07
48	7.86	32.345	7.16	25.23	30	8.14	32.20	25.08	289	0.10
72	7.67	32.430	6.80	25.33	50	7.84	32.36	25.25	274	0.15
97	7.70	32.825	5.09	25.63	75	7.66	32.46	25.35	264	0.22
121	7.70	33.422	3.86	26.10	100	7.70	32.89	25.68	233	0.28
145	7.52	33.619	3.31	26.28	125	7.68	33.48	26.15	189	0.34
193	6.74	33.891	2.56	26.60	150	7.46	33.65	26.32	174	0.38
241	6.15	33.949	2.63	26.73	175	7.10	33.81	26.49	158	0.42
289	5.55	34.011	1.59	26.85	200	6.64	33.91	26.63	144	0.46
337	4.94	34.069	1.08	26.97	250	6.04	33.96	26.75	134	0.53
385	4.82	34.137	1.25	27.03	300	5.41	34.02	26.88	122	0.60
425	4.82	34.112	1.03	27.01	400	4.81	34.14	27.03	108	0.71
CNAV OSHAWA; April 22, 1959; 0511 GCT; 50°40.5'N, 127°13.5'W; sounding, 60 fm; wind, missing; weather, clear; sea, calm.										130
0	8.50	31.088	6.89	24.16	0	8.50	31.09	24.16	377	0.00
2	8.32	30.973	7.08	24.09	10	8.32	30.97	24.10	383	0.04
6	8.30	30.975	7.05	24.10	20	8.32	30.98	24.10	383	0.08
10	8.32	30.975	7.06	24.10	30	8.22	31.08	24.19	374	0.12
20	8.32	30.981	7.02	24.10	50	7.75	31.58	24.65	330	0.18
50	7.75	31.583	5.91	24.65	75	7.72	31.96	24.95	302	0.26
75	7.72	31.961	5.46	24.95						

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
131	CNAV OSHAWA; April 22, 1959; 0827 GCT; 50°28'N, 126°10'W; sounding, 173 fm; wind, 220°, 5 kt; weather, overcast; sea, calm.									
0	8.30	30.198	6.66	23.49	0	8.30	30.20	23.49	440	0.00
2	8.08	30.195	6.66	23.52	10	8.06	30.36	23.65	425	0.04
10	8.06	30.360	6.40	23.65	20	8.02	30.49	23.76	416	0.09
24	8.00	30.511	6.60	23.78	30	7.97	30.57	23.83	408	0.13
48	7.83	30.735	6.37	23.98	50	7.82	30.74	23.99	394	0.21
71	7.77	30.752	5.83	24.00	75	7.76	30.76	24.00	392	0.31
95	7.75	30.793	5.73	24.03	100	7.75	30.81	24.05	389	0.40
143	7.70	31.000	6.22	24.20	125	7.72	30.90	24.12	382	0.50
190	7.72	31.025	6.23	24.22	150	7.70	31.01	24.21	373	0.60
238	7.76	31.066	6.18	24.25	175	7.71	31.04	24.23	372	0.69
250	(7.77)a)	(31.079)a)	-	(24.25)	200	7.73	31.03	24.22	373	0.78
					250	7.77	31.08	24.25	371	0.97
132	CNAV OSHAWA; April 22, 1959; 0856 GCT; 50°29'N, 126°09.5'W; sounding, 116 fm; wind, 220°, 2 kt; weather, overcast; sea, calm.									
0	8.10	30.462	6.67	23.73	0	8.10	30.46	23.73	418	0.00
2	8.04	30.438	6.66	23.72	10	7.94	30.53	23.80	411	0.04
8	7.96	30.511	6.54	23.78	20	7.86	30.58	23.85	406	0.08
20	7.86	30.583	6.48	23.85	30	7.83	30.64	23.90	402	0.12
41	7.84	30.699	6.45	23.95	50	7.81	30.74	23.99	394	0.20
62	7.75	30.791	6.28	24.03	75	7.74	30.82	24.06	387	0.30
82	7.75	30.831	6.32	24.06	100	7.74	30.88	24.10	384	0.40
123	7.72	30.953	6.32	24.16	125	7.72	30.96	24.17	378	0.49
164	7.72	31.014	6.27	24.21	150	7.72	31.00	24.20	375	0.59
133	CNAV OSHAWA; April 22, 1959; 1256 GCT; 50°00'N, 125°12'W; sounding, 40 fm; wind, 340°, 5 kt; weather, partly cloudy; sea, calm.									
0	9.30	29.337	6.64	22.67	0	9.30	29.34	22.67	519	0.00
2	8.83	29.311	6.58	22.72	10	8.88	29.55	22.90	497	0.05
6	8.77	29.437	6.56	22.83	20	8.83	29.68	23.01	486	0.10
10	8.88	29.549	6.46	22.90	30	8.80	29.73	23.06	482	0.15
20	8.83	29.684	6.02	23.01	50	8.81	29.69	23.02	486	0.25
40	8.80	29.695	5.98	23.03	75	8.83	29.68	23.01	488	0.37
60	8.83	29.678	6.10	23.01						
70	(8.83)b)	29.676	6.11	(23.01)						
75	(8.83)a)	(29.677)a)	-	(23.01)						
134	CNAV OSHAWA; April 22, 1959; 1318 GCT; 50°00'N, 125°13'W; sounding, 14 fm; wind, 340°, 5 kt; weather, partly cloudy; sea, calm.									
0	9.10	29.566	6.53	22.88	0	9.10	29.57	22.88	499	0.00
2	8.86	29.561	6.46	22.91	10	8.80	29.56	22.92	495	0.05
6	8.83	29.565	6.46	22.92	20	8.80	29.56	22.92	495	0.10
10	8.80	29.562	6.42	22.92						
20	8.80	29.564	6.41	22.92						
135	CNAV OSHAWA; April 22, 1959; 1423 GCT; 50°04'N, 125°07'W; sounding, 142 fm; wind, 340°, 10 kt; weather, partly cloudy; sea, slight.									
0	9.70	28.757	9.66	22.16	0	9.70	28.76	22.16	568	0.00
2	9.72	28.951	9.21	22.31	10	9.67	28.75	22.16	568	0.06
9	9.70	28.758	9.30	22.16	20	8.87	28.96	22.44	541	0.11
23	8.48	29.120	6.08	22.62	30	8.21	29.30	22.80	507	0.16
46	8.46	29.700	4.60	23.08	50	8.46	29.76	23.13	476	0.26
69	8.47	29.862	4.30	23.20	75	8.49	29.91	23.24	466	0.38
92	8.61	30.041	4.22	23.32	100	8.64	30.09	23.36	454	0.50
138	8.69	30.279	4.12	23.50	125	8.69	30.23	23.46	445	0.61
184	8.80	30.480	3.86	23.64	150	8.72	30.34	23.54	438	0.72
230	8.96	30.571	3.63	23.69	175	8.78	30.44	23.61	431	0.83
					200	8.85	30.52	23.67	427	0.94

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

CNAV OSHAWA; April 22, 1959; 1617 GCT; 49°50.5'N, 124°53'W; sounding, 180 fm; wind, 320°, 15 kt; weather, cloudy; sea, slight. 136

0	10.20	28.515	9.45	21.89	0	10.20	28.52	21.89	593	0.00
2	10.07	28.545	9.43	21.94	10	9.00	28.78	22.29	556	0.06
10	9.00	28.785	8.34	22.29	20	8.31	29.14	22.67	520	0.11
25	8.24	29.347	5.43	22.84	30	8.13	29.47	22.94	493	0.16
50	8.45	29.622	4.91	23.02	50	8.45	29.62	23.02	486	0.26
75	8.60	30.002	4.54	23.30	75	8.60	30.00	23.30	460	0.38
100	8.70	30.174	4.24	23.41	100	8.70	30.17	23.41	449	0.49
150	8.52	30.362	4.29	23.59	125	8.67	30.29	23.51	440	0.60
200	8.98	30.575	3.54	23.69	150	8.52	30.36	23.59	433	0.72
250	9.02	30.629	3.47	23.72	175	8.67	30.47	23.65	428	0.82
275	9.19	30.671	3.30	23.73	200	8.98	30.58	23.69	425	0.93
					250	9.02	30.63	23.72	422	1.14

CNAV OSHAWA; April 22, 1959; 1708 GCT; 49°43'N, 124°49'W; sounding, 48 fm; wind, 320°, 5 kt; weather, cloudy; sea, slight. 137

0	10.50	28.024	9.23	21.47	0	10.50	28.02	21.47	634	0.00
2	10.50	27.999	9.49	21.45	10	9.10	28.66	22.18	566	0.06
10	9.10	28.664	9.25	22.18	20	8.26	29.16	22.69	517	0.11
25	8.22	29.277	5.62	22.78	30	8.10	29.42	22.91	496	0.16
50	8.50	29.640	5.22	23.03	50	8.50	29.64	23.03	485	0.26
75	8.58	29.763	4.97	23.11	75	8.58	29.76	23.11	478	0.38
85	8.59	29.776	4.92	23.12						

CNAV OSHAWA; April 22, 1959; 1754 GCT; 49°44'N, 124°40'W; sounding, 140 fm; wind, 320°, 5 kt; weather, cloudy; sea, slight. 138

0	10.40	28.415	9.62	21.78	0	10.40	28.42	21.78	604	0.00
2	10.32	28.354	10.07	21.75	10	8.30	29.02	22.57	528	0.06
10	8.30	29.024	6.51	22.57	20	7.64	29.32	22.89	498	0.11
24	7.96	29.266	5.40	22.81	30	7.93	29.35	22.88	499	0.16
49	8.26	29.568	5.02	23.00	50	8.27	29.58	23.01	487	0.26
73	8.43	29.941	4.46	23.27	75	8.43	29.96	23.29	461	0.38
98	8.36	30.100	4.57	23.41	100	8.36	30.11	23.42	449	0.49
147	8.34	30.278	4.58	23.55	125	8.33	30.22	23.50	441	0.60
196	8.52	30.458	4.25	23.66	150	8.35	30.29	23.56	436	0.71
245	8.79	30.558	3.87	23.70	175	8.42	30.38	23.62	431	0.82
					200	8.54	30.47	23.67	426	0.93

CNAV OSHAWA; April 22, 1959; 1845 GCT; 49°37'N, 124°39.5'W; sounding, 90 fm; wind, 320°, 5 kt; weather, cloudy; sea, missing. 139

0	10.80	28.638	11.13	21.89	0	10.80	28.64	21.89	593	0.00
2	10.78	28.608	11.59	21.87	10	10.18	28.74	22.07	576	0.06
10	10.18	28.741	11.85	22.07	20	9.04	28.89	22.37	548	0.12
25	8.30	28.960	6.89	22.52	30	7.99	29.05	22.64	522	0.17
50	8.29	29.483	5.35	22.93	50	8.29	29.48	22.93	494	0.27
75	8.34	29.746	4.81	23.13	75	8.34	29.75	23.13	476	0.39
100	8.46	30.085	4.52	23.38	100	8.46	30.08	23.38	452	0.51
150	8.72	30.509	3.94	23.67	125	8.59	30.34	23.56	436	0.62
					150	8.72	30.51	23.67	425	0.73

CNAV OSHAWA; April 22, 1959; 2100 GCT; 49°24.5'N, 124°07'W; sounding, 216 fm; wind, 140°, 2 kt; weather, partly cloudy; sea, calm. 140

0	13.40	27.841	8.98	20.81	0	13.40	27.84	20.81	697	0.00
2	9.88	28.079	8.19	21.61	10	8.41	28.69	22.30	554	0.06
10	8.41	28.691	6.68	22.30	20	8.02	29.20	22.75	512	0.12
20	8.02	29.197	5.87	22.75	30	7.84	29.55	23.05	483	0.17
50	8.10	29.791	5.00	23.20	50	8.10	29.79	23.20	469	0.26
100	7.91	30.081	5.44	23.45	75	8.06	30.05	23.41	450	0.38
150	8.00	30.269	5.25	23.59	100	7.91	30.08	23.45	445	0.49
200	8.46	30.486	4.44	23.69	125	7.92	30.19	23.54	438	0.60
300	9.32	31.019	2.74	23.98	150	8.00	30.27	23.59	433	0.71
350	9.31	31.046	3.14	24.00	175	8.18	30.37	23.65	428	0.82
					200	8.46	30.49	23.69	424	0.92
					250	8.90	30.74	23.82	412	1.14
					300	9.32	31.02	23.98	398	1.34

POG

CS-59-I

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
141	CNAV OSHAWA; April 22, 1959; 2246 GCT; 49°22'N, 123°34'W; sounding, 76 fm; wind, 140°, 10 kt; weather, partly cloudy; sea, slight.									
0	12.00	27.509	8.10	20.81	0	12.00	27.51	20.81	697	0.00
2	11.58	27.452	8.17	20.84	10	10.76	28.03	21.43	638	0.07
9	10.96	27.942	8.59	21.33	20	7.77	29.06	22.68	518	0.12
18	8.14	28.911	6.77	22.51	30	7.26	29.49	23.08	480	0.18
36	8.06	29.480	5.75	22.96	50	8.05	29.78	23.20	469	0.27
53	8.05	29.822	5.33	23.23	75	8.05	29.87	23.27	463	0.39
71	8.05	29.855	5.34	23.26	100	8.09	29.96	23.34	457	0.50
107	8.10	29.994	5.13	23.36						
142	CNAV OSHAWA; April 22, 1959; 2306 GCT; 49°17.5'N, 123°40.5'W; sounding, 142 fm; wind, 140°, 10 kt; weather, cloudy; sea, slight.									
0a)	11.4	28.06		21.34	0	11.40	28.06	21.34	646	0.00
20	8.7	29.27		22.71	10	9.91	28.72	22.10	574	0.06
95	8.5	29.84		23.18	20	8.70	29.27	22.71	515	0.12
140	8.6	30.03		23.32	30	7.77	29.71	23.18	470	0.16
160	8.7	30.18		23.42	50	6.74	30.25	23.74	417	0.25
220	9.2	30.61		23.68	75	7.02	30.30	23.74	417	0.36
					100	8.50	29.87	23.20	469	0.47
					125	8.55	29.98	23.28	462	0.59
					150	8.65	30.10	23.36	454	0.70
					175	8.80	30.29	23.49	443	0.82
					200	9.00	30.47	23.60	433	0.92
143	CNAV OSHAWA; April 23, 1959; 0008 GCT; 49°14'N, 123°47.5'W; sounding, 120 fm; wind, 140°, 10 kt; weather, cloudy; sea, slight.									
0	11.80	27.643	7.88	20.95	0	11.80	27.64	20.95	684	0.00
2	11.64	28.220	8.23	21.43	10	10.12	28.65	22.01	582	0.06
10	10.12	28.647	8.40	22.01	20	9.16	29.05	22.47	538	0.12
24	9.06	(29.172)b)	7.78	(22.58)	30	8.71	29.31	22.74	513	0.17
48	8.06	29.412	6.15	22.91	50	8.03	29.44	22.94	494	0.27
72	8.20	29.816	5.03	23.21	75	8.20	29.85	23.23	466	0.39
96	8.12	30.011	4.98	23.37	100	8.11	30.04	23.39	451	0.51
120	8.10	30.168	4.98	23.50	125	8.10	30.20	23.52	439	0.62
144	8.11	30.287	5.13	23.59	150	8.14	30.32	23.61	431	0.73
192	8.68	30.630	3.94	23.77	175	8.39	30.49	23.71	422	0.84
200	(8.85)c)	(30.701)c)	-	(23.80)	200	8.85	30.70	23.80	414	0.94

a) Data obtained by sea sampler.
b) Value interpolated by three-point parabolic method.
c) Value extrapolated by three-point parabolic method.

CRUISE CS-59-1, SURFACE OBSERVATIONS

Date	Time GCT	Latitude North	Longitude West	T °C	S ‰	O_2 ml/L
III-31	2110	48°31.0'	123°10.0'	8.2	30.521	6.69
31	2323	48°42.5'	123°27.0'	8.3	28.747	6.88
IV-1	0100	48°42.5'	123°59.8'	8.4	28.315	6.80
1	0255	48°43.2'	123°33.3'	8.1	21.142	7.11
1	0336	48°41.1'	123°31.3'	7.9	28.918	6.61
1	0535	48°37.9'	123°31.2'	8.1	29.051	6.61
1	0652	48°37.9'	123°31.9'	8.3	28.619	6.76
1	1927	48°30.0'	122°45.0'	8.3	29.920	6.54
1	2000	48°25.0'	122°47.0'	8.5	29.330	6.46
1	2030	48°23.0'	122°55.0'	8.7	30.228	6.35
1	2100	48°22.0'	123°05.0'	9.0	30.755	6.41
1	2130	48°20.0'	123°13.0'	8.7	30.845	6.19
1	2200	48°19.0'	123°18.0'	8.5	30.864	6.30
2	1900	48°00.2'	125°02.5'	9.7	32.196	6.98
2	2115	47°46.8'	124°53.8'	10.5	32.396	6.88
2	2225	47°38.7'	124°53.8'	10.5	31.488	6.91
3	0028	47°28.3'	124°43.0'	11.5	25.987	7.64
3	0045	47°26.2'	124°33.8'	10.2	30.623	6.97
3	0123	47°18.5'	124°39.8'	9.7	32.138	7.14
3	0535	46°47.7'	124°33.2'	10.1	28.592	7.09
5	0025	46°14.0'	124°25.9'	11.7	15.502	7.35
5	0500	46°13.6'	124°54.5'	10.7	32.403	6.68
5	1040	46°13.9'	125°49.0'	10.3	32.365	6.79
5	1940	46°13.0'	126°58.0'	9.5	32.446	6.95
6	0440	46°14.5'	128°27.0'	8.7	32.538	6.95
7	0740	48°11.0'	125°43.5'	9.4	32.067	6.87
7	0825	48°16.0'	125°31.0'	9.4	31.483	7.20
7	0900	48°22.0'	125°18.0'	9.3	29.099	7.38
9	1013	48°44.0'	126°33.0'	9.2	32.429	6.91
9	1345	49°16.1'	126°54.0'	8.9	30.517	8.01
9	1445	49°29.0'	126°59.0'	8.8	30.380	7.95
9	1545	49°37.0'	127°03.1'	9.5	30.850	7.11
9	1600	49°45.1'	127°04.1'	9.7	30.455	7.67
9	1700	49°54.5'	127°21.8'	9.6	30.522	7.57
9	1800	49°58.7'	127°40.8'	9.9	30.452	8.04
10	0326	49°30.0'	128°52.0'	8.6	32.501	6.98
11	0105	48°08.0'	132°07.0'	8.2	32.589	7.10
11	1757	49°52.0'	135°03.0'	6.8	32.633	7.14
12	0117	50°34.0'	134°55.0'	7.0	32.627	7.25
12	0700	51°02.0'	133°50.0'	6.9	32.571	7.28
12	1300	51°29.0'	132°21.0'	7.7	32.392	7.11
12	1700	51°47.0'	131°28.0'	8.1	32.341	7.00
15	0200	52°15.8'	128°35.8'	7.9	29.674	8.33
19	2030	55°00.0'	134°33.0'	7.3	31.450	7.38
20	0145	55°02.0'	135°31.0'	7.1	32.417	7.35
20	0620	54°40.0'	136°00.0'	6.9	32.561	7.28
20	0750	54°20.0'	136°00.0'	7.4	32.351	7.24
20	1235	54°01.0'	135°33.1'	7.6	32.340	7.22
20	1607	54°00.0'	134°28.5'	7.5	32.359	7.19

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

1

CNAV OSHAWA; June 8, 1959; 2013 GCT; 48°43'N, 123°27'W; sounding, 48 fm; wind, 140°, 2 kt; weather, cloudy; sea, calm.

0	12.40	29.057	8.06	21.94	0	12.40	29.06	21.94	589	0.00
2	12.02	29.004	8.25	21.96	10	9.85	29.69	22.86	501	0.06
6	9.90	29.622	5.68	22.80	20	9.55	30.15	23.27	462	0.10
10	9.85	29.692	5.63	22.86	30	9.35	30.45	23.53	437	0.15
20	9.55	30.151	5.29	23.27	50	9.27	30.59	23.65	426	0.24
50	9.27	30.590	4.95	23.65	75	8.91	31.19	24.18	376	0.34
80	8.83	31.337	4.47	24.30						

2

CNAV OSHAWA; June 8, 1959; 2248 GCT; 48°43.5'N, 123°33'W; sounding, 36 fm; wind, 090°, 3 kt; weather, cloudy; sea, calm.

0	11.30	29.105	5.97	22.17	0	11.30	29.11	22.17	567	0.00
2	10.48	29.333	5.73	22.48	10	10.06	29.40	22.60	525	0.06
6	10.32	29.342	5.88	22.52	20	9.81	29.65	22.84	503	0.11
10	10.06	29.400	5.54	22.60	30	9.62	29.85	23.03	485	0.16
19	9.83	29.629	5.37	22.82	50	9.43	30.15	23.28	461	0.25
48	9.46	30.096	5.00	23.24						
58	9.31	30.375	4.95	23.48						
60	(9.28)a)	(30.438)a)	-	(23.53)						

3

CNAV OSHAWA; June 9, 1959; 0044 GCT; 48°32.5'N, 123°33'W; sounding, 112 fm; wind, 300°, 2 kt; weather, overcast; sea, calm.

0	12.40	28.954	-	21.86	0	12.40	28.95	21.86	597	0.00
2	11.55	29.006	8.70	22.05	10	9.68	29.22	22.53	533	0.06
6	10.18	29.151	8.44	22.39	20	8.87	29.42	22.80	507	0.11
10	9.68	29.223	6.16	22.53	30	8.46	29.60	23.00	488	0.16
20	8.87	29.420	5.30	22.80	50	8.20	29.94	23.31	459	0.25
30	8.46	29.602	4.65	23.00	75	8.39	30.43	23.66	426	0.36
50	8.20	29.945	3.60	23.31						
75	8.39	30.428	1.48	23.66						

4

CNAV OSHAWA; June 9, 1959; 0153 GCT; 48°34'N, 123°30.5'W; sounding, 12 fm; wind, calm; weather, overcast; sea, calm.

0	13.30	28.939	-	21.68	0	13.30	28.94	21.68	614	0.00
2	11.82	29.021	9.64	22.01	10	9.84	29.22	22.50	536	0.06
6	10.48	29.130	8.84	22.33	20	8.98	29.40	22.77	510	0.11
10	9.84	29.218	6.31	22.50	30	8.57	29.60	22.98	489	0.16
20	8.98	29.398	4.89	22.77	50	8.48	29.96	23.28	461	0.26
30	8.57	29.596	4.98	22.98	75	8.60	30.39	23.60	431	0.37
50	8.48	29.964	4.54	23.28						
75	8.60	30.393	3.11	23.60						

5

CNAV OSHAWA; June 9, 1959; 0332 GCT; 48°37.5'N, 123°30'W; sounding, 106 fm; wind, calm; weather, overcast; sea, calm. b)

0	12.90	28.948	8.92	21.76	0	12.90	28.95	21.76	606	0.00
2	11.34	29.036	9.57	22.11	10	9.66	29.26	22.56	530	0.06
6	9.98	29.166	6.69	22.43	20	9.12	29.41	22.75	511	0.11
10	9.66	29.262	5.59	22.56	30	8.91	29.59	22.93	494	0.16
20	9.12	29.407	5.53	22.75	50	9.02	30.04	23.26	463	0.26
30	8.91	29.592	5.23	22.93	75	9.04	30.47	23.60	431	0.37
50	9.02	30.038	4.54	23.26	100	8.70	30.65	23.78	414	0.47
75	9.04	30.474	4.36	23.60	125	8.96	30.98	24.01	393	0.58
100	8.70	30.646	2.72	23.78	150	9.10	31.19	24.15	380	0.67
125	8.96	30.984	0.25	24.01	175	9.09	31.23	24.18	377	0.77
150	9.10	31.190	0.10	24.15	200	9.10	31.11	24.09	387	0.86
175	9.09	31.233	0.05	24.18						
200	9.10	(31.113)a)	-	(24.09)						

a) Value extrapolated by three-point parabolic method.

b) See page 766 for time series, Station 5, Saanich Inlet.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
6	CNAV OSHAWA; June 9, 1959; 1652 GCT; 48°41'N, 123°31'W; sounding, 37 fm; wind, 230°, 2 kt; weather, moderate rain; sea, calm.									
0	11.80	19.152u	7.23	14.40	0	11.80	19.15	14.40	1316	0.00
2	10.48	29.024	6.52	22.24	10	9.88	29.48	22.70	516	0.09
6	10.00	29.433	5.58	22.64	20	9.67	29.58	22.81	506	0.14
10	9.88	29.484	5.48	22.70	30	9.47	29.77	22.99	489	0.19
20	9.67	29.583	5.34	22.81	50	9.45	30.17	23.30	460	0.29
30	9.47	29.774	5.30	22.99						
50	9.45	30.169	5.12	23.30						
60	9.14	30.340	4.76	23.48						
7	CNAV OSHAWA; June 9, 1959; 1743 GCT; 48°41.5'N, 123°30'W; sounding, 47 fm; wind, 180°, 3 kt; weather, moderate rain; sea, calm.									
0	11.80	27.991	7.80	21.22	0	11.80	27.99	21.22	658	0.00
2	10.90	29.068	8.28	22.21	10	9.63	29.30	22.59	527	0.06
6	10.12	29.298	5.92	22.51	20	9.04	29.54	22.87	500	0.11
10	9.63	29.295	5.52	22.59	30	9.52	29.85	23.04	484	0.16
20	9.04	29.538	5.34	22.87	50	9.42	30.20	23.32	457	0.26
30	9.52	29.852	5.34	23.04	75	9.06	30.48	23.60	431	0.37
50	9.42	30.197	5.15	23.32						
75	9.06	30.481	4.23	23.60						
85	9.01	30.564	4.18	23.67						
8	CNAV OSHAWA; June 10, 1959; 1137 GCT; 48°46.5'N, 123°03'W; sounding, 104 fm; wind, 220°, 8 kt; weather, cloudy; sea, slight.									
0	9.40	30.036	5.34	23.20	0	9.40	30.04	23.20	468	0.00
2	9.15	30.022	5.32	23.23	10	9.30	30.14	23.30	459	0.05
6	9.19	30.041	5.29	23.24	20	9.28	30.32	23.44	445	0.09
10	9.30	30.137	5.37	23.30	30	9.27	30.42	23.52	438	0.14
20	9.28	30.322	5.20	23.44	50	9.20	30.61	23.68	423	0.22
30	9.27	30.423	5.14	23.52	75	9.14	30.66	23.73	419	0.33
50	9.20	30.610	5.04	23.68	100	9.15	30.76	23.81	412	0.43
74	9.14	30.656	4.93	23.72	125	9.06	30.94	23.96	398	0.54
99	9.15	30.758	4.90	23.80	150	8.91	31.21	24.19	376	0.63
124	9.06	30.933	4.66	23.95	175	8.84	31.46	24.40	356	0.72
149	8.91	31.200	4.51	24.18						
173	8.84	31.445	4.34	24.39						
175	(8.84)a)	(31.465)a)	-	(24.40)						
9	CNAV OSHAWA; June 10, 1959; 1234 GCT; 48°43.5'N, 122°58.5'W; sounding, 78 fm; wind, 180°, 10 kt; weather, partly cloudy; sea, slight.									
0	9.90	28.855	5.92	22.21	0	9.90	28.86	22.21	563	0.00
2	9.79	28.757	6.02	22.15	10	9.39	29.96	23.14	474	0.05
6	9.72	28.923	6.20	22.29	20	9.41	30.14	23.28	461	0.10
10	9.39	29.957	5.41	23.14	30	9.37	30.29	23.40	449	0.14
20	9.41	30.136	5.36	23.28	50	9.40	30.33	23.43	447	0.24
30	9.37	30.289	5.29	23.40	75	9.30	30.42	23.52	439	0.35
50	9.40	30.329	5.19	23.43	100	9.22	30.55	23.63	429	0.46
75	9.30	30.420	5.14	23.52	125	9.17	30.79	23.82	411	0.56
100	(9.22)b)	30.545	5.00	(23.63)						
125	9.17	30.787	4.84	23.82						
10	CNAV OSHAWA; June 10, 1959; 1348 GCT; 48°41'N, 122°47.5'W; sounding, 55 fm; wind, 140°, 7 kt; weather, cloudy; sea, calm.									
0	9.70	30.049	5.85	23.17	0	9.70	30.05	23.17	472	0.00
2	9.52	30.056	5.68	23.20	10	9.52	30.06	23.20	468	0.05
6	9.52	30.063	5.67	23.20	20	9.50	30.09	23.23	466	0.09
10	9.52	30.063	5.85	23.20	30	9.50	30.08	23.22	466	0.14
20	9.50	30.089	5.57	23.23	50	9.45	30.21	23.33	456	0.23
30	9.50	30.085	5.34	23.22	75	9.37	30.38	23.47	444	0.35
50	9.45	30.212	5.29	23.33						
75	9.37	30.376	5.14	23.47						
89	(9.32)a)	30.466	-	(23.55)						

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

11

CNAV OSHAWA; June 10, 1959; 1436 GCT; 48°42.5'N, 122°44'W; sounding, 36 fm; wind, 140°, 10 kt; weather, cloudy; sea, slight.

0	9.80	29.923	6.06	23.05	0	9.80	29.92	23.05	482	0.00
2	9.68	29.931	6.05	23.08	10	9.64	30.29	23.36	453	0.05
6	9.65	30.189	5.58	23.28	20	9.60	30.25	23.33	456	0.09
10	9.64	30.293	5.62	23.36	30	9.59	30.27	23.36	454	0.14
20	9.60	30.247	5.50	23.33	50	9.58	30.31	23.39	451	0.23
30	9.59	30.274	5.60	23.36						
50	9.58	30.315	5.48	23.39						
60	9.56	30.336	5.44	23.41						

12

CNAV OSHAWA; June 10, 1959; 1929 GCT; 48°16.5'N, 123°32'W; sounding, 97 fm; wind, 210°, 5 kt; weather, cloudy; sea, slight.

0	10.00	31.633	5.36	24.35	0	10.00	31.63	24.35	359	0.00
2	9.10	31.638	5.06	24.50	10	9.05	31.72	24.57	338	0.04
6	9.04	31.702	4.77	24.56	20	8.97	31.71	24.58	337	0.07
10	9.05	31.717	4.70	24.57	30	8.96	31.73	24.59	336	0.10
20	8.97	31.714	4.77	24.58	50	8.90	31.85	24.69	327	0.17
30	8.96	31.735	4.70	24.59	75	7.72	33.04	25.80	222	0.24
50	8.90	31.850	4.61	24.69						
75	7.72	33.041	3.20	25.80						

13

CNAV OSHAWA; June 10, 1959; 2026 GCT; 48°13.5'N, 123°32'W; sounding, 80 fm; wind, 210°, 1 kt; weather, cloudy; sea, calm.

0	11.70	30.558	6.16	23.22	0	11.70	30.56	23.22	466	0.00
2	10.11	30.675	5.88	23.59	10	9.64	30.88	23.82	410	0.04
6	9.84	30.724	5.87	23.67	20	9.04	31.42	24.34	360	0.08
10	9.64	30.875	5.48	23.82	30	8.88	31.65	24.54	341	0.12
20	9.04	31.421	4.12	24.34	50	8.78	31.78	24.66	330	0.18
30	8.88	31.647	4.42	24.54	75	8.44	32.24	25.06	292	0.26
50	8.78	31.781	4.37	24.66	100	8.10	32.64	25.43	257	0.33
75	8.44	32.236	3.93	25.06	125	7.56	33.27	26.00	204	0.39
100	8.10	32.643	3.51	25.43						
125	7.56	33.267	3.00	26.00						
140	7.41	33.429	2.72	26.15						

14

CNAV OSHAWA; June 10, 1959; 2115 GCT; 48°10.5'N, 123°32.5'W; sounding, 14 fm; wind, 040°, 2 kt; weather, partly cloudy; sea, calm.

0	12.00	31.060	5.45	23.56	0	12.00	31.06	23.56	434	0.00
2	9.87	31.184	5.43	24.02	10	9.33	31.49	24.35	359	0.04
6	9.63	31.317	5.22	24.16	20	9.30	31.48	24.34	360	0.08
10	9.33	31.494	4.95	24.35						
20	9.30	31.480	4.94	24.34						

15

CNAV OSHAWA; June 10, 1959; 2325 GCT; 48°23'N, 123°59.5'W; sounding, 50 fm; wind, 140°, 8 kt; weather, partly cloudy; sea, slight.

0	10.60	31.545	5.74	24.18	0	10.60	31.55	24.18	375	0.00
2	9.56	31.504	5.87	24.32	10	9.44	31.54	24.37	357	0.04
6	9.54	31.515	5.69	24.33	20	9.28	31.56	24.41	353	0.07
10	9.44	31.543	5.56	24.37	30	9.08	31.64	24.50	344	0.11
20	9.28	31.562	5.34	24.41	50	8.75	32.03	24.85	311	0.17
30	9.08	31.642	4.85	24.50	75	8.10	32.60	25.40	260	0.24
50	8.75	32.028	4.22	24.85						
75	8.10	32.602	3.47	25.40						

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
16	CNAV OSHAWA; June 11, 1959; 0019 GCT; 48°14'N, 124°02.5'W; sounding, 100 fm; wind, 140°, 5 kt; weather, partly cloudy; sea, slight.									
0	10.20	31.426	6.59	24.16	0	10.20	31.43	24.16	377	0.00
2	9.81	31.412	6.55	24.21	10	9.78	31.41	24.21	372	0.04
6	9.89	31.390	7.33	24.18	20	9.24	31.55	24.40	354	0.07
10	9.78	31.410	6.67	24.21	30	8.88	31.78	24.64	332	0.11
20	9.24	31.546	5.09	24.40	50	8.38	32.24	25.08	290	0.17
30	8.88	31.776	4.49	24.64	75	7.72	33.16	25.89	213	0.23
50	8.38	32.241	3.88	25.08	100	7.30	33.61	26.31	174	0.28
75	7.72	33.155	3.06	25.89	125	7.06	33.77	26.46	160	0.32
100	7.30	33.612	2.46	26.31	150	6.87	33.86	26.56	150	0.36
125	7.06	33.769	2.34	26.46	175	6.81	33.87	26.58	149	0.40
150	6.87	33.862	2.21	26.56						
175	6.81	33.872	2.12	26.58						
17	CNAV OSHAWA; June 11, 1959; 0114 GCT; 48°13.5'N, 124°05.5'W; sounding, 66 fm; wind, 130°, 4 kt; weather, cloudy; sea, calm.									
0	10.80	31.380	8.39	24.02	0	10.80	31.38	24.02	390	0.00
2	10.20	31.401	8.00	24.14	10	9.52	31.61	24.41	353	0.04
6	9.94	31.522	7.23	24.27	20	9.33	32.12	24.84	313	0.07
10	9.52	31.615	5.54	24.41	30	8.92	32.55	25.23	275	0.10
20	9.33	32.119	5.26	24.84	50	8.46	33.59	26.12	191	0.15
30	8.92	32.546	4.51	25.23	75	7.32	33.73	26.40	165	0.19
50	8.46	33.594	3.88	26.12	100	7.13	33.81	26.48	157	0.23
75	7.32	33.733	2.56	26.40						
100	7.13	33.805	2.33	26.48						
18	CNAV OSHAWA; June 11, 1959; 0500 GCT; 48°24'N, 124°48'W; sounding, 110 fm; wind, 160°, 5 kt; weather, intermittent moderate rain; sea, slight.									
0	13.80	27.649	6.33	20.59	0	13.80	27.65	20.59	718	0.00
2	13.69	27.813	6.37	20.74	10	12.68	30.44	22.95	492	0.06
6	13.59	28.099	6.70	20.97	20	11.64	31.52	23.98	394	0.10
9	12.88	29.961	6.45	22.54	30	11.09	31.76	24.26	368	0.14
19	11.72	31.445	6.19	23.91	50	8.41	32.58	25.34	265	0.21
28	11.26	31.691	6.57	24.18	75	7.77	32.82	25.62	239	0.27
47	8.66	32.503	5.04	25.24	100	7.50	33.33	26.06	198	0.33
70	7.88	32.739	4.83	25.54	125	7.19	33.75	26.43	162	0.37
94	7.58	33.213	4.44	25.95	150	7.09	33.83	26.51	156	0.41
117	7.26	33.667	3.08	26.36						
141	7.10	33.810	2.57	26.49						
165	7.13	33.832	2.53	26.50						
19	CNAV OSHAWA; June 11, 1959; 0830 GCT; 47°54.5'N, 125°03'W; sounding, 68 fm; wind, 140°, 8 kt; weather, squalls, intermittent moderate rain; sea, moderate.									
0	11.70	31.368	7.27	23.85	0	11.70	31.37	23.85	406	0.00
2	11.62	31.552	7.06	24.01	10	11.59	31.55	24.01	391	0.04
6	11.60	31.603	6.45	24.05	20	8.24	32.19	25.06	292	0.07
10	11.59	31.552	5.64	24.01	30	6.66	32.55	25.56	244	0.10
19	8.50	32.140	5.60	24.98	50	8.21	32.54	25.33	266	0.15
48	8.25	32.511	5.28	25.31	75	7.58	32.92	25.73	229	0.22
73	7.64	32.891	3.94	25.69						
75	(7.58)a)	(32.924)a)	-	(25.73)						
20	CNAV OSHAWA; June 11, 1959; 1309 GCT; 47°31'N, 124°33'W; sounding, 20 fm; wind, 140°, 30 kt; weather, overcast; sea, very rough.									
0	13.00	31.404	6.50	23.63	0	13.00	31.40	23.63	427	0.00
2	12.92	31.429	6.60	23.67	10	12.89	31.41	23.66	424	0.04
6	12.92	31.408	6.48	23.65	20	10.76	32.08	24.57	338	0.08
10	12.89	31.413	6.51	23.66						
20	10.76	32.084	5.77	24.57						
25	9.12	32.560	4.23	25.21						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; June 11, 1959; 1508 GCT; 47°05.5'N, 124°50'W; sounding, 74 fm; wind, 160°, 15 kt; weather, partly cloudy; sea, moderate.										21
0	12.70	31.516	6.48	23.78	0	12.70	31.52	23.78	413	0.00
2	12.52	31.487	6.40	23.79	10	12.50	31.48	23.79	412	0.04
6	12.52	31.479	6.31	23.78	20	12.29	31.68	23.98	394	0.08
10	12.50	31.479	6.40	23.79	30	9.08	32.12	24.87	309	0.12
19	12.46	31.647	6.31	23.93	50	8.24	32.56	25.35	264	0.18
29	9.30	32.081	5.87	24.81	75	7.82	32.96	25.72	230	0.24
49	8.28	32.541	4.90	25.33	100	7.69	33.48	26.15	189	0.29
73	7.84	32.918	4.93	25.69	125	7.08	33.96	26.61	145	0.33
97	7.73	33.419	3.68	26.09						
122	7.18	33.907	1.72	26.55						
125	(7.08)a)	(33.963)a)	-	(26.61)						
CNAV OSHAWA; June 11, 1959; 1824 GCT; 46°40.5'N, 124°14.5'W; sounding, 22 fm; wind, 180°, 10 kt; weather, intermittent slight drizzle; sea, slight.										22
0	14.40	17.452	6.66	12.66	0	14.40	17.45	12.66	1486	0.00
2	14.10	19.941	6.56	14.62	10	13.88	21.41	15.78	1182	0.13
6	13.96	20.616	6.60	15.16	20	13.54	30.64	22.94	493	0.22
10	13.88	21.409	6.60	15.78	30	10.90	31.74	24.28	366	0.26
19	13.68	30.103	6.42	22.50						
29	11.14	31.649	6.21	24.17						
34	9.96	31.991	5.43	24.63						
CNAV OSHAWA; June 12, 1959; 2209 GCT; 46°14'N, 124°12'W; sounding, 26 fm; wind, 220°, 5 kt; weather, partly cloudy; sea, slight.										23
0	15.80	5.019	7.39	2.89	0	15.80	5.02	2.89	2447	0.00
2	14.41	17.311	6.80	12.55	10	13.63	29.64	22.15	569	0.15
6	13.84	28.783	6.44	21.45	20	13.37	30.26	22.68	518	0.20
10	13.63	29.641	6.38	22.15	30	10.77	31.57	24.17	376	0.25
20	13.37	30.262	6.41	22.68						
30	10.77	31.568	5.39	24.17						
39	9.48	32.124	4.23	24.82						
CNAV OSHAWA; June 13, 1959; 0015 GCT; 46°14'N, 124°40'W; sounding, missing; wind, 250°, 5 kt; weather, partly cloudy; sea, calm.										24
0	14.00	31.708	6.53	23.67	0	14.00	31.71	23.67	424	0.00
10	12.96	31.703	6.37	23.87	10	12.96	31.70	23.87	404	0.04
20	12.83	31.791	6.44	23.97	20	12.83	31.79	23.97	396	0.08
30	10.58	31.952	6.36	24.50	30	10.58	31.95	24.50	345	0.12
50	8.44	32.416	6.02	25.20	50	8.44	32.42	25.20	278	0.18
75	8.44	32.948	5.24	25.62	75	8.44	32.95	25.62	239	0.25
99	(8.15)b)	33.585	3.64	(26.16)	100	8.13	33.60	26.18	186	0.30
123	7.57	33.827	2.58	26.44	125	7.53	33.84	26.45	161	0.34
148	7.19	33.922	2.49	26.57	150	7.16	33.93	26.57	149	0.38
172	6.80	33.959	2.39	26.65	175	6.77	33.96	26.65	142	0.42
197	6.72	33.980	1.80	26.68	200	6.71	33.98	26.68	140	0.46
246	6.56	34.004	1.80	26.72	250	6.54	34.01	26.72	137	0.52
295	6.31	34.025	1.65	26.76	300	6.28	34.03	26.77	133	0.59
392	5.81	34.058	1.51	26.85	400	5.77	34.06	26.86	125	0.72
488	5.27	34.148	0.78	26.99	500	5.20	34.16	27.01	111	0.84
500	(5.20)a)	(34.163)a)	-	(27.01)						

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
25	CNAV OSHAWA; June 13, 1959; 0326 GCT; 46°14'N, 125°09'W; sounding, 900 fm; wind, 240°, 5 kt; weather, partly cloudy; sea, slight.									
0	14.10	32.204	6.00	24.03	0	14.10	32.20	24.03	389	0.00
10	13.30	32.246	6.21	24.22	10	13.30	32.25	24.22	371	0.04
20	12.84	32.314	6.19	24.37	20	12.84	32.31	24.37	357	0.08
30	11.74	32.465	6.83	24.69	30	11.74	32.47	24.69	327	0.11
50	9.68	32.489	6.86	25.07	50	9.68	32.49	25.07	291	0.17
74	8.80	32.543	6.79	25.25	75	8.77	32.55	25.26	273	0.24
98	(8.13)a)	33.038	4.99	(25.74)	100	8.08	33.07	25.77	225	0.30
123	7.65	33.404	4.40	26.09	125	7.63	33.43	26.12	192	0.36
147	7.51	33.679	3.86	26.33	150	7.51	33.71	26.35	171	0.40
172	7.64	33.843	2.96	26.44	175	7.63	33.86	26.45	161	0.44
196	7.37	33.966	2.94	26.57	200	7.32	33.98	26.59	148	0.48
245	6.62	33.976	2.38	26.69	250	6.56	33.98	26.69	139	0.56
294	6.18	34.000	2.03	26.76	300	6.13	34.00	26.77	132	0.62
392	5.52	34.056	1.28	26.89	400	5.48	34.06	26.90	121	0.75
491	5.16	34.153	0.89	27.01	500	5.13	34.16	27.02	111	0.87
590	4.82	34.205	0.70	27.09	600	4.78	34.21	27.10	104	0.98
691	4.46	34.269	0.38	27.18	700	4.43	34.27	27.19	96	1.08
792	4.12	34.318	0.28	27.25	800	4.09	34.32	27.26	89	1.17
993	3.57	34.414	0.31	27.39	1000	3.55	34.42	27.39	78	1.34
1000	(3.55)b)	(34.417)b)	-	(27.39)						
26	CNAV OSHAWA; June 13, 1959; 0830 GCT; 46°14'N, 126°12'W; sounding, 1400+ fm; wind, 250°, force missing; weather, partly cloudy; sea, slight.									
0	13.30	32.060	6.37	24.08	0	13.30	32.06	24.08	384	0.00
10	13.30	32.004	6.26	24.04	10	13.30	32.00	24.04	389	0.04
20	12.82	32.236	6.41	24.31	20	12.82	32.24	24.31	363	0.08
30	12.32	32.388	6.53	24.52	30	12.32	32.39	24.52	343	0.11
48	9.98	32.465	6.92	25.00	50	9.81	32.48	25.04	294	0.18
72	9.12	32.632	6.22	25.27	75	9.02	32.67	25.31	268	0.25
96	(8.39)a)	33.059	4.71	(25.72)	100	8.28	33.11	25.77	225	0.31
120	7.78	33.313	4.52	26.00	125	7.69	33.36	26.06	198	0.36
144	7.44	33.555	4.13	26.24	150	7.38	33.61	26.29	176	0.41
167	7.27	33.743	3.88	26.41	175	7.20	33.79	26.46	161	0.45
191	7.06	33.841	3.67	26.52	200	6.98	33.87	26.55	152	0.49
239	6.58	33.923	3.06	26.65	250	6.50	33.94	26.67	142	0.56
286	6.33	33.963	2.62	26.71	300	6.25	33.97	26.73	136	0.64
384	5.66	34.043	2.50	26.86	400	5.56	34.05	26.88	123	0.76
480	5.15	34.097	1.47	26.96	500	5.06	34.11	26.99	114	0.88
579	4.80	34.174	0.97	27.07	600	4.72	34.19	27.09	105	1.00
679	4.38	34.239	0.73	27.16	700	4.31	34.25	27.18	96	1.10
779	4.13	34.299	0.42	27.24	800	4.08	34.31	27.25	90	1.19
976	3.58	34.409	0.69	27.38	1000	3.52	34.42	27.40	77	1.36
1172	3.16	(34.484)a)	-	(27.48)	1200	3.10	34.49	27.49	68	1.51
1460	2.60	34.532	0.45	27.57						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

27

CNAV OSHAWA; June 13, 1959; 1455 GCT; 46°14'N, 127°41'W; sounding, 1500+ fm; wind, 270°, 5 kt; weather, cloudy; sea, calm.

0	12.60	32.473	6.69	24.54	0	12.60	32.47	24.54	341	0.00
10	12.42	32.458	6.53	24.56	10	12.42	32.46	24.56	339	0.03
19	12.42	32.457	6.51	24.56	20	12.40	32.46	24.56	339	0.07
29	12.10	32.451	6.45	24.61	30	12.03	32.45	24.63	333	0.10
48	9.76	32.495	6.83	25.06	50	9.60	32.50	25.09	289	0.16
72	9.02	32.545	6.58	25.22	75	8.94	32.57	25.25	274	0.24
96	8.40	32.865	5.48	25.56	100	8.27	32.93	25.63	238	0.30
120	7.54	33.270	4.98	26.00	125	7.40	33.34	26.08	196	0.36
144	6.96	33.530	4.34	26.29	150	6.89	33.58	26.34	172	0.40
168	6.84	33.703	4.18	26.44	175	6.78	33.75	26.49	158	0.44
191	6.58	33.859	4.00	26.60	200	6.49	33.90	26.64	144	0.48
239	6.17	33.921	3.49	26.70	250	6.09	33.93	26.72	137	0.55
286	5.86	33.955	3.47	26.77	300	5.86	33.96	26.77	132	0.62
386	6.76	33.896	2.98	26.60	400	6.81	33.89	26.59	152	0.76
484	6.76	33.820	2.35	26.54	500	6.69	33.83	26.56	155	0.92
583	5.97	33.984	2.23	26.78	600	5.83	34.00	26.81	132	1.06
683	5.13	34.064	1.13	26.94	700	5.01	34.08	26.97	117	1.19
783	4.52	34.173	0.55	27.10	800	4.43	34.19	27.12	103	1.30
982	3.70	34.344	0.30	27.32	1000	3.64	34.36	27.33	83	1.49
1182	3.12	34.475	0.38	27.48	1200	3.07	34.48	27.49	69	1.64
1481	2.46	34.542	0.34	27.59	1500	2.43	34.54	27.59	59	1.84
1500	(2.43)a)	(34.541)a)	-	(27.59)						

28

CNAV OSHAWA; June 13, 1959; 2137 GCT; 46°14.5'N, 129°13.5'W; sounding, 1040 fm; wind, 180°, 10 kt; weather, partly cloudy; sea, slight.

0	12.70	32.637	6.50	24.64	0	12.70	32.64	24.64	331	0.00
10	11.88	32.524	6.58	24.71	10	11.88	32.52	24.71	324	0.03
20	11.81	32.518	6.49	24.72	20	11.81	32.52	24.72	324	0.06
30	11.10	32.582	6.68	24.90	30	11.10	32.58	24.90	307	0.10
49	9.55	32.625	7.22	25.19	50	9.53	32.63	25.20	279	0.16
73	10.93	32.620	6.78	24.96	75	10.84	32.63	24.98	300	0.23
96	7.92	32.871	6.05	25.64	100	7.65	32.93	25.72	230	0.30
120	7.38	33.284	5.34	26.04	125	7.28	33.36	26.11	193	0.35
144	6.94	33.589	4.68	26.34	150	6.90	33.65	26.39	167	0.39
168	6.96	33.783	3.94	26.49	175	6.89	33.83	26.53	154	0.43
191	6.60	(33.898)b)	3.72	(26.63)	200	6.47	33.92	26.67	141	0.47
238	5.96	33.919	3.02	26.73	250	5.85	33.92	26.74	134	0.54
285	5.66	33.942	2.54	26.78	300	5.56	33.95	26.80	129	0.61
382	4.98	34.004	1.62	26.91	400	4.89	34.02	26.93	117	0.73
480	4.62	34.086	1.15	27.02	500	4.55	34.10	27.04	108	0.85
576	4.31	34.163	0.62	27.11	600	4.24	34.18	27.13	100	0.95
675	4.03	34.232	0.44	27.19	700	3.98	34.25	27.22	92	1.05
775	3.87	34.313	0.39	27.28	800	3.82	34.33	27.29	86	1.14
972	3.34	34.400	0.34	27.40	1000	3.28	34.41	27.41	75	1.30
1168	3.02	(34.466)b)	-	(27.48)	1200	2.96	34.47	27.49	68	1.44
1460	2.46	34.525	0.75	27.58	1500	2.38	34.53	27.59	59	1.64
1500	(2.38)a)	(34.530)a)	-	(27.59)						

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

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CS-59-2

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
29	CNAV OSHAWA; June 14, 1959; 0408 GCT; 47°03'N, 128°07'W; sounding, missing; wind, 260°, 2 kt; weather, cloudy; sea, calm.									
0	13.20	32.464	6.54	24.41	0	13.20	32.46	24.41	353	0.00
10	12.60	32.453	6.71	24.52	10	12.60	32.45	24.52	342	0.04
20	12.49	32.451	6.45	24.54	20	12.49	32.45	24.54	341	0.07
30	12.34	32.417	6.36	24.54	30	12.34	32.42	24.54	341	0.10
49	9.58	32.468	6.36	25.07	50	9.48	32.47	25.09	289	0.17
73	8.62	32.560	6.31	25.29	75	8.58	32.59	25.32	268	0.24
98	8.62	33.128	4.73	25.73	100	8.56	33.16	25.77	225	0.30
123	7.23	33.359	4.78	26.12	125	7.17	33.38	26.14	190	0.35
148	6.98	33.602	4.34	26.34	150	6.97	33.62	26.36	170	0.40
172	7.06	33.828	3.74	26.51	175	7.05	33.84	26.52	154	0.44
197	6.82	33.877	3.55	26.58	200	6.79	33.88	26.59	148	0.48
246	6.10	33.972	3.38	26.75	250	6.05	33.97	26.76	133	0.55
296	5.67	33.944	2.44	26.78	300	5.64	33.94	26.78	131	0.61
396	4.92	33.999	1.76	26.91	400	4.90	34.00	26.92	119	0.74
496	4.78	34.126	0.74	27.03	500	4.77	34.13	27.03	109	0.85
596	4.55	34.204	0.52	27.12	600	4.54	34.21	27.12	101	0.96
696	4.18	34.250	0.42	27.19	700	4.17	34.25	27.20	94	1.06
796	4.10	34.332	0.39	27.27	800	4.09	34.33	27.27	88	1.15
996	3.48	34.405	0.38	27.39	1000	3.47	34.41	27.39	78	1.32
1196	3.03	34.447	-	27.46	1200	3.02	34.45	27.46	71	1.47
1495	2.50	34.523	0.77	27.57	1500	2.49	34.52	27.57	61	1.67
1500	(2.49)a)	(34.524)a)	-	(27.57)						
30	CNAV OSHAWA; June 14, 1959; 1001 GCT; 47°45'N, 127°10'W; sounding, 1430 fm; wind, 320°, 3 kt; weather, cloudy; sea, calm.									
0	12.80	32.334	6.51	24.39	0	12.80	32.33	24.39	355	0.00
10	12.26	32.295	6.43	24.46	10	12.26	32.30	24.46	348	0.04
20	12.16	32.292	6.03	24.48	20	12.16	32.29	24.48	347	0.07
30	11.85	32.356	6.50	24.59	30	11.85	32.36	24.59	337	0.10
50	9.39	32.499	6.78	25.12	50	9.39	32.50	25.12	286	0.17
75	(8.07)b)	32.944	5.01	(25.67)	75	8.07	32.94	25.67	234	0.23
100	8.71	33.479	3.68	25.99	100	8.71	33.48	25.99	204	0.29
125	8.44	33.647	3.26	26.17	125	8.44	33.65	26.17	188	0.34
150	8.22	33.744	2.98	26.28	150	8.22	33.74	26.28	178	0.38
175	8.02	33.807	2.77	26.36	175	8.02	33.81	26.36	171	0.43
198	7.78	33.864	2.73	26.44	200	7.76	33.87	26.44	163	0.47
248	7.32	33.944	2.47	26.56	250	7.30	33.95	26.57	151	0.55
296	6.76	34.002	2.29	26.69	300	6.72	34.01	26.70	140	0.62
420	5.56	34.040	1.56	26.87	400	5.73	34.04	26.85	126	0.76
714	4.32	34.244	0.50	27.17	500	5.00	34.08	26.97	115	0.88
1070	3.34	34.419	0.34	27.41	600	4.53	34.15	27.07	106	0.99
					700	4.33	34.23	27.16	98	1.09
					800	4.03	34.29	27.24	91	1.19
					1000	3.49	34.39	27.38	79	1.36

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

31

CNAV OSHAWA; June 14, 1959; 1557 GCT; 48°26.5'N, 126°13'W; sounding, 320 fm; wind, 320°, 10 kt; weather, cloudy; sea, slight.

0	12.90	31.844	6.49	23.99	0	12.90	31.84	23.99	393	0.00
10	12.28	31.838	6.39	24.11	10	12.28	31.84	24.11	382	0.04
20	11.91	31.933	6.54	24.25	20	11.91	31.93	24.25	369	0.08
30	10.09	32.262	6.80	24.82	30	10.09	32.26	24.82	314	0.11
50	8.44	32.501	6.70	25.27	50	8.44	32.50	25.27	272	0.17
74	7.86	32.841	5.75	25.62	75	7.84	32.86	25.64	237	0.23
98	7.47	33.298	4.60	26.04	100	7.45	33.33	26.06	197	0.29
123	7.26	33.608	4.10	26.31	125	7.25	33.63	26.33	172	0.34
148	7.10	33.800	3.51	26.48	150	7.09	33.81	26.49	157	0.38
172	6.91	33.880	3.44	26.57	175	6.88	33.89	26.58	149	0.42
196	6.64	33.917	3.11	26.64	200	6.59	33.92	26.65	143	0.45
246	6.04	33.958	2.60	26.75	250	6.01	33.96	26.75	133	0.52
295	5.96	34.009	1.85	26.80	300	5.94	34.01	26.80	129	0.59
396	5.40	34.078	1.06	26.92	400	5.38	34.08	26.92	119	0.71
496	5.03	34.140	0.65	27.01	500	5.01	34.14	27.02	111	0.83
545	4.82	34.173	0.63	27.06						

32

CNAV OSHAWA; June 14, 1959; 1801 GCT; 48°35'N, 126°02'W; sounding, 58 fm; wind, 300°, 3 kt; weather, cloudy; sea, slight.

0	12.60	32.044	6.57	24.21	0	12.60	32.04	24.21	372	0.00
2	12.24	32.022	6.57	24.26	10	12.06	32.02	24.29	364	0.04
6	12.20	32.026	6.63	24.27	20	11.54	32.03	24.39	355	0.07
10	12.06	32.022	6.60	24.29	30	10.52	32.20	24.70	326	0.11
20	11.54	32.032	6.60	24.39	50	8.04	32.67	25.46	254	0.17
30	10.52	32.197	6.51	24.70	75	7.76	32.67	25.50	250	0.23
50	8.04	32.670	4.22	25.46	100	7.28	33.59	26.29	175	0.28
75	7.76	32.670	3.24	25.50						
100	7.28	33.592	2.53	26.29						

33

CNAV OSHAWA; June 14, 1959; 1908 GCT; 48°42'N, 125°52'W; sounding, 35 fm; wind, 300°, 5 kt; weather, cloudy; sea, slight.

0	12.70	31.430	6.57	23.71	0	12.70	31.43	23.71	419	0.00
2	12.42	31.403	6.71	23.74	10	12.34	31.54	23.86	405	0.04
6	12.33	31.420	6.80	23.77	20	11.46	31.56	24.04	388	0.08
10	12.34	31.539	6.88	23.86	30	10.46	31.66	24.29	365	0.12
20	11.46	31.564	6.30	24.04	50	8.80	32.40	25.14	284	0.18
30	10.46	31.655	5.61	24.29						
50	8.80	32.400	4.10	25.14						

34

CNAV OSHAWA; June 14, 1959; 2125 GCT; 48°54'N, 125°33.5'W; sounding, 50 fm; wind, 270°, 3 kt; weather, missing; sea, slight. a)

0	13.30	29.824	7.95	22.36	0	13.30	29.82	22.36	549	0.00
2	12.99	29.665	8.24	22.30	10	11.84	30.72	23.32	457	0.05
6	12.41	30.103	8.14	22.74	20	11.11	31.28	23.89	403	0.09
10	11.84	30.715	7.02	23.32	30	10.64	31.50	24.14	379	0.13
20	11.11	31.279	6.48	23.89	50	9.28	31.81	24.60	336	0.20
30	10.64	31.499	5.96	24.14	75	8.68	32.23	25.03	295	0.28
50	9.28	31.807	5.04	24.60						
75	8.68	32.234	4.11	25.03						
90	8.28	32.470	3.28	25.27						

35

CNAV OSHAWA; June 16, 1959; 0343 GCT; 48°43'N, 125°06'W; sounding, 24 fm; wind, 270°, 10 kt; weather, partly cloudy; sea, slight.

0	14.20	28.490	7.16	21.16	0	14.20	28.49	21.16	664	0.00
2	13.43	28.875	6.83	21.60	10	11.38	29.94	22.80	506	0.06
6	13.37	28.966	6.83	21.68	20	9.47	31.43	24.27	366	0.10
10	11.38	29.940	6.16	22.80	30	8.93	31.86	24.70	326	0.14
19	9.60	31.324	5.36	24.17						
29	8.92	31.868	4.42	24.70						
30	(8.93)b)	(31.865)b)	-	(24.70)						

a) See page 769 for time series, Station 34, Amphitrite Point, Barkley Sound.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
36	CNAV OSHAWA; June 16, 1959; 0431 GCT; 48°36.5'N, 125°06.5'W; sounding, 48 fm; wind, 270°, 15 kt; weather, partly cloudy; sea, slight.									
0	13.90	27.853	6.78	20.73	0	13.90	27.85	20.73	705	0.00
2	14.00	27.748	6.83	20.63	10	13.22	28.76	21.55	626	0.07
6	13.76	28.109	6.75	20.95	20	10.59	30.87	23.66	425	0.12
10	(13.22)a)	28.760	6.68	(21.55)	30	9.01	31.83	24.66	329	0.16
20	10.59	30.874	5.75	23.66	50	8.46	32.43	25.21	278	0.22
29	9.13	31.757	4.93	24.58	75	7.78	33.16	25.88	214	0.28
49	8.49	32.395	3.90	25.18						
73	7.83	33.104	3.20	25.83						
75	(7.78)b)	(33.160)b)	-	(25.88)						
37	CNAV OSHAWA; June 16, 1959; 0534 GCT; 48°29.5'N, 125°06'W; sounding, 78 fm; wind, 270°, 15 kt; weather, partly cloudy; sea, slight.									
0	13.70	28.741	6.80	21.45	0	13.70	28.74	21.45	636	0.00
2	13.68	28.542	6.73	21.30	10	13.38	28.93	21.66	616	0.06
6	13.66	28.523	6.75	21.29	20	11.58	31.58	24.04	389	0.11
10	(13.38)a)	28.934	6.63	(21.66)	30	8.88	32.52	25.21	277	0.15
20	11.58	31.579	6.45	24.04	50	7.92	33.06	25.78	223	0.20
30	8.88	32.515	4.15	25.21	75	7.25	33.60	26.30	174	0.25
49	7.96	33.034	3.53	25.76	100	7.04	33.72	26.42	163	0.29
74	7.27	33.587	2.69	26.29	125	6.80	33.81	26.53	153	0.33
99	7.05	33.712	2.32	26.42						
124	6.81	33.811	2.04	26.53						
125	(6.80)b)	(33.814)b)	-	(26.53)						
38	CNAV OSHAWA; June 16, 1959; 0649 GCT; 48°26'N, 124°57'W; sounding, 140 fm; wind, 270°, 15 kt; weather, partly cloudy; sea, slight.									
0	12.00	30.135	6.63	22.84	0	12.00	30.14	22.84	502	0.00
2	11.98	30.054	6.14	22.78	10	11.93	30.28	22.97	491	0.05
6	11.89	30.185	6.67	22.90	20	11.10	31.64	24.17	376	0.09
10	11.93	30.281	6.50	22.97	30	8.95	32.27	25.01	296	0.13
20	(11.10)a)	31.644	6.66	(24.17)	50	7.98	32.90	25.65	236	0.18
30	8.95	32.270	5.46	25.01	75	7.08	33.68	26.39	166	0.23
49	8.02	32.866	3.85	25.62	100	7.02	33.72	26.43	162	0.27
74	7.10	33.659	2.40	26.37	125	6.89	33.79	26.50	156	0.31
99	7.02	33.716	2.08	26.43	150	6.77	33.86	26.57	150	0.35
123	6.90	33.780	1.93	26.49	175	6.74	33.88	26.59	148	0.39
148	6.78	33.852	1.95	26.57	200	6.69	33.88	26.60	147	0.43
173	6.74	33.875	1.85	26.59	250	6.68	33.91	26.63	146	0.50
197	6.69	33.880	2.00	26.60						
247	6.68	33.909	1.92	26.62						
250	(6.68)b)	(33.912)b)	-	(26.63)						
39	CNAV OSHAWA; June 18, 1959; 0421 GCT; 49°03'N, 126°47'W; sounding, 132 fm; wind, 340°, 1 kt; weather, partly cloudy; sea, calm.									
0	14.10	32.114	7.55	23.96	0	14.10	32.11	23.96	396	0.00
10	12.52	31.936	6.52	24.14	10	12.52	31.94	24.14	379	0.04
20	10.78	32.236	6.34	24.69	20	10.78	32.24	24.69	327	0.07
30	8.88	32.458	4.63	25.17	30	8.88	32.46	25.17	281	0.10
50	(6.31)a)	32.916	5.17	(25.89)	50	6.31	32.92	25.89	212	0.16
75	(5.39)a)	33.436	4.20	(26.41)	75	5.39	33.44	26.41	163	0.20
100	7.04	33.620	3.92	26.35	100	7.04	33.62	26.35	170	0.24
125	6.97	33.786	3.31	26.49	125	6.97	33.79	26.49	157	0.28
150	6.99	33.898	2.53	26.57	150	6.99	33.90	26.57	149	0.32
174	6.70	33.933	2.36	26.64	175	6.69	33.93	26.64	143	0.36
199	6.30	33.958	2.22	26.71	200	6.29	33.96	26.72	136	0.40
229	5.98	33.989	1.77	26.78						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; June 18, 1959; 1047 GCT; 50°06'N, 127°57.5'W; sounding, 36 fm; wind, 360°, 5 kt; weather, missing; sea, calm.										40
0	13.90	31.027	6.58	23.17	0	13.90	31.03	23.17	472	0.00
2	13.99	30.724	7.11	22.91	10	12.22	31.17	23.60	430	0.04
6	12.96	30.972	7.28	23.31	20	11.64	31.54	23.99	393	0.09
10	(12.22)a)	31.168	7.02	(23.60)	30	11.36	31.72	24.18	375	0.12
20	11.64	31.537	6.24	23.99	50	10.88	32.50	24.87	310	0.19
30	11.36	31.718	6.10	24.18						
50	10.88	32.496	6.63	24.87						
CNAV OSHAWA; June 18, 1959; 1212 GCT; 50°02'N, 128°02'W; sounding, 300+ fm; wind, calm; weather, partly cloudy; sea, calm.										41
0	12.40	31.882	6.44	24.12	0	12.40	31.88	24.12	381	0.00
10	12.02	31.876	6.39	24.18	10	12.02	31.88	24.18	375	0.04
20	10.88	32.279	6.34	24.70	20	10.88	32.28	24.70	325	0.07
30	(10.12)a)	32.332	6.26	(24.87)	30	10.12	32.33	24.87	309	0.10
50	9.74	32.397	5.70	24.99	50	9.74	32.40	24.99	299	0.17
75	8.02	32.613	5.95	25.42	75	8.02	32.61	25.42	258	0.24
100	7.33	33.087	4.59	25.89	100	7.33	33.09	25.89	214	0.30
125	6.75	33.572	4.30	26.35	125	6.75	33.57	26.35	170	0.34
150	6.56	33.720	3.76	26.49	150	6.56	33.72	26.49	157	0.38
175	6.44	33.846	3.24	26.61	175	6.44	33.85	26.61	146	0.42
200	6.22	33.893	2.79	26.67	200	6.22	33.89	26.67	140	0.46
250	5.78	33.921	2.26	26.75	250	5.78	33.92	26.75	134	0.53
300	5.40	33.951	-	26.82	300	5.40	33.95	26.82	127	0.59
400	5.16	34.047	1.32	26.92	400	5.16	34.05	26.92	118	0.72
CNAV OSHAWA; June 18, 1959; 1516 GCT; 49°45'N, 128°28.5'W; sounding, 1200+ fm; wind, calm; weather, partly cloudy; sea, calm.										43
0	12.20	32.575	6.66	24.69	0	12.20	32.58	24.69	326	0.00
10	11.65	32.523	6.59	24.75	10	11.65	32.52	24.75	320	0.03
20	10.82	32.528	6.69	24.91	20	10.82	32.53	24.91	306	0.06
30	10.61	32.532	6.77	24.95	30	10.61	32.53	24.95	302	0.10
50	(9.75)a)	32.574	6.95	(25.12)	50	9.75	32.57	25.12	286	0.15
75	7.84	32.617	6.75	25.45	75	7.84	32.62	25.45	255	0.22
100	7.10	32.605	6.86	25.54	100	7.10	32.61	25.54	246	0.28
125	7.34	33.000	5.76	25.82	125	7.34	33.00	25.82	220	0.34
150	6.74	33.528	5.01	26.32	150	6.74	33.53	26.32	174	0.39
175	6.44	33.687	4.86	26.48	175	6.44	33.69	26.48	158	0.44
199	6.30	33.756	4.60	26.55	200	6.29	33.76	26.56	151	0.47
249	5.80	33.874	3.63	26.71	250	5.79	33.88	26.71	137	0.55
298	5.38	33.938	2.47	26.81	300	5.36	33.94	26.82	128	0.61
398	4.68	33.992	1.74	26.93	400	4.67	33.99	26.94	117	0.74
497	4.42	34.105	0.79	27.05	500	4.41	34.11	27.06	106	0.85
597	4.21	34.171	0.83	27.13	600	4.20	34.17	27.13	100	0.95
698	3.86	34.243	0.49	27.22	700	3.86	34.24	27.22	92	1.05
800	3.72	34.316	0.35	27.29	800	3.72	34.32	27.29	86	1.14
1000	3.26	34.405	0.49	27.41	1000	3.26	34.41	27.41	75	1.30
1200	2.90	34.455	0.49	27.48	1200	2.90	34.45	27.48	69	1.45
1500	2.47	34.518	0.85	27.57	1500	2.47	34.52	27.57	61	1.65

a) Value interpolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
44	CNAV OSHAWA; June 18, 1959; 2148 GCT; 49°04'N, 129°29'W; sounding, 1300+ fm; wind, 100°, 10 kt; weather, cloudy; sea, slight.									
0	13.50	32.507	6.54	24.39	0	13.50	32.51	24.39	355	0.00
10	12.07	32.525	6.58	24.68	10	12.07	32.53	24.68	328	0.03
20	11.08	32.604	6.55	24.92	20	11.08	32.60	24.92	305	0.07
30	10.58	32.604	6.60	25.01	30	10.58	32.60	25.01	297	0.10
50	8.72	32.614	6.86	25.32	50	8.72	32.61	25.32	267	0.15
75	8.05	32.632	6.58	25.43	75	8.05	32.63	25.43	257	0.22
100	7.44	32.653	6.60	25.53	100	7.44	32.65	25.53	247	0.28
125	7.50	33.281	4.92	26.02	125	7.50	33.28	26.02	202	0.34
150	6.81	33.627	4.78	26.39	150	6.81	33.63	26.39	167	0.38
175	6.67	33.737	4.63	26.49	175	6.67	33.74	26.49	158	0.43
200	6.56	33.802	4.19	26.56	200	6.56	33.80	26.56	152	0.46
249	5.80	33.884	3.61	26.72	250	5.79	33.89	26.72	136	0.54
299	5.33	33.910	3.05	26.80	300	5.32	33.91	26.80	129	0.60
398	4.68	33.993	1.56	26.94	400	4.67	33.99	26.94	117	0.73
497	4.31	34.077	0.85	27.04	500	4.30	34.08	27.04	107	0.84
596	4.10	34.153	0.68	27.12	600	4.09	34.16	27.13	100	0.95
698	3.89	34.221	0.49	27.20	700	3.89	34.22	27.20	94	1.04
799	3.78	34.292	0.36	27.27	800	3.78	34.29	27.27	88	1.14
1000	3.28	34.391	0.32	27.40	1000	3.28	34.39	27.40	76	1.30
1200	2.92	34.467	0.44	27.49	1200	2.92	34.47	27.49	68	1.45
1500	2.44	34.530	0.68	27.58	1500	2.44	34.53	27.58	60	1.64
45	CNAV OSHAWA; June 19, 1959; 0403 GCT; 48°23.5'N, 130°23'W; sounding, 1500+ fm; wind, 140°, 3 kt; weather, cloudy; sea, slight.									
0	12.80	32.635	6.37	24.62	0	12.80	32.64	24.62	333	0.00
10	12.26	32.620	6.50	24.72	10	12.26	32.62	24.72	324	0.03
20	11.34	32.622	6.59	24.89	20	11.34	32.62	24.89	308	0.06
29	10.96	32.614	6.66	24.95	30	10.90	32.61	24.96	301	0.10
49	9.01	32.639	6.94	25.29	50	8.94	32.64	25.30	269	0.15
74	8.29	32.632	6.78	25.40	75	8.26	32.63	25.40	260	0.22
98	7.34	32.624	6.76	25.53	100	7.28	32.64	25.55	246	0.28
123	(6.89)a)	33.035	5.56	(25.91)	125	6.87	33.07	25.94	209	0.34
148	6.98	33.513	5.12	26.27	150	6.97	33.54	26.30	176	0.39
172	6.67	33.716	4.32	26.47	175	6.64	33.73	26.49	157	0.43
196	6.42	33.811	3.94	26.58	200	6.38	33.82	26.60	148	0.47
245	6.12	33.893	3.25	26.69	250	6.09	33.90	26.69	139	0.54
294	5.76	33.939	2.60	26.77	300	5.71	33.94	26.78	132	0.61
393	4.90	34.035	1.33	26.94	400	4.86	34.04	26.95	115	0.73
492	4.48	34.073	0.94	27.02	500	4.46	34.08	27.03	109	0.85
590	4.31	34.158	0.55	27.11	600	4.28	34.17	27.12	101	0.95
692	3.92	34.227	0.67	27.20	700	3.89	34.23	27.21	93	1.05
792	3.66	34.283	0.38	27.27	800	3.64	34.29	27.28	87	1.14
993	3.22	34.385	0.38	27.40	1000	3.21	34.39	27.40	76	1.31
1191	2.85	34.452	0.55	27.48	1200	2.83	34.45	27.49	68	1.45
1478	2.40	34.515	0.84	27.57	1500	2.37	34.52	27.58	60	1.65
1500	(2.37)b)	(34.518)b)	-	(27.58)						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

46

CNAV OSHAWA; June 19, 1959; 1023 GCT; 47°42.5'N, 131°20'W; sounding, 1500+ fm; wind, 180°, 15 kt; weather, fog in patches; sea, slight.

0	12.40	32.698	6.55	24.75	0	12.40	32.70	24.75	321	0.00
9	11.60	32.643	6.52	24.86	10	11.50	32.64	24.87	309	0.03
19	10.57	32.658	6.71	25.05	20	10.52	32.66	25.06	291	0.06
29	10.45	32.649	6.70	25.06	30	10.41	32.65	25.07	291	0.09
48	8.63	32.615	7.06	25.33	50	8.49	32.61	25.35	264	0.15
73	7.59	32.620	6.97	25.49	75	7.54	32.62	25.50	250	0.21
98	7.22	32.724	6.54	25.62	100	7.20	32.75	25.65	237	0.27
122	(6.99)a)	33.261	5.54	(26.07)	125	6.97	33.31	26.12	192	0.33
147	6.87	33.556	5.29	26.32	150	6.86	33.58	26.34	171	0.37
171	6.83	33.677	5.00	26.42	175	6.80	33.70	26.44	162	0.42
195	6.60	33.791	4.83	26.54	200	6.55	33.81	26.56	151	0.45
244	6.08	33.890	3.56	26.69	250	6.02	33.90	26.70	138	0.53
291	5.58	33.934	2.62	26.78	300	5.50	33.94	26.80	129	0.59
389	4.92	33.999	1.59	26.91	400	4.86	34.01	26.93	118	0.72
487	4.48	34.060	1.04	27.01	500	4.44	34.07	27.02	109	0.83
584	4.30	34.134	0.68	27.09	600	4.27	34.14	27.10	103	0.94
684	4.07	34.172	0.46	27.14	700	4.03	34.18	27.16	98	1.04
788	3.82	34.285	0.41	27.26	800	3.79	34.30	27.27	88	1.14
989	3.30	34.384	0.30	27.39	1000	3.28	34.39	27.39	77	1.30
1185	2.94	34.455	0.39	27.48	1200	2.91	34.46	27.48	69	1.45
1480	2.40	34.527	0.73	27.58	1500	2.36	34.53	27.59	59	1.64
1500	(2.36)b)	(34.530)b)	-	(27.59)						

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CNAV OSHAWA; June 19, 1959; 1658 GCT; 46°57'N, 132°20'W; sounding, >2000 fm; wind, 180°, 15 kt; weather, fog in patches; sea, moderate.

0	12.70	32.686	6.48	24.68	0	12.70	32.69	24.68	327	0.00
10	12.28	32.677	6.47	24.76	10	12.28	32.68	24.76	320	0.03
19	11.42	32.683	6.54	24.92	20	11.36	32.68	24.93	304	0.06
29	11.19	32.682	6.54	24.96	30	11.15	32.68	24.97	300	0.09
48	9.68	32.723	6.63	25.25	50	9.57	32.73	25.27	272	0.15
73	9.05	32.771	6.63	25.39	75	8.99	32.78	25.40	260	0.22
98	8.21	32.834	6.23	25.57	100	8.16	32.85	25.58	243	0.28
122	7.79	33.060	5.64	25.80	125	7.74	33.09	25.84	219	0.34
147	7.46	33.380	5.26	26.10	150	7.43	33.42	26.13	191	0.39
171	7.23	33.649	5.12	26.35	175	7.19	33.68	26.37	169	0.44
195	7.00	33.735	4.92	26.44	200	6.95	33.75	26.46	160	0.48
244	6.57	33.864	4.48	26.60	250	6.51	33.87	26.62	146	0.56
292	5.98	33.907	3.78	26.71	300	5.89	33.91	26.73	136	0.63
389	5.03	33.949	2.44	26.86	400	4.94	33.96	26.88	123	0.76
486	4.41	34.020	1.47	26.99	500	4.35	34.03	27.00	111	0.88
583	4.20	34.113	1.00	27.08	600	4.15	34.13	27.10	103	0.98
682	3.86	34.195	0.62	27.18	700	3.82	34.21	27.20	94	1.08
884	3.78	34.286	0.42	27.26	800	3.71	34.26	27.25	90	1.18
992	3.37	34.393	0.37	27.39	1000	3.34	34.40	27.40	77	1.34
1192	2.89	34.443	0.40	27.47	1200	2.87	34.44	27.48	69	1.49
1492	2.43	34.515	0.73	27.57	1500	2.42	34.52	27.57	60	1.69
1500	(2.42)b)	(34.517)b)	-	(27.57)						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
48	CNAV OSHAWA; June 20, 1959; 0358 GCT; 47°25'N, 135°05'W; sounding, >2000 fm; wind, 180°, 15 kt; weather, partly cloudy; sea, moderate.									
0	12.20	32.686	6.43	24.78	0	12.20	32.69	24.78	318	0.00
10	11.60	32.661	6.38	24.87	10	11.60	32.66	24.87	309	0.03
20	11.33	32.681	6.58	24.93	20	11.33	32.68	24.93	303	0.06
30	10.27	32.683	6.84	25.12	30	10.27	32.68	25.12	286	0.09
50	10.01	32.706	6.90	25.18	50	10.01	32.71	25.18	280	0.15
75	8.17	32.735	6.85	25.49	75	8.17	32.73	25.49	251	0.22
100	7.62	32.883	6.69	25.69	100	7.62	32.88	25.69	233	0.28
124	7.29	33.292	5.82	26.06	125	7.27	33.31	26.07	197	0.33
148	6.72	33.607	5.30	26.38	150	6.68	33.63	26.40	166	0.38
173	6.25	33.744	5.04	26.55	175	6.22	33.75	26.56	151	0.42
192	6.02	33.795	4.74	26.62	200	5.93	33.81	26.65	143	0.45
240	5.53	33.872	3.83	26.74	250	5.46	33.89	26.76	132	0.52
287	5.26	33.943	3.19	26.83	300	5.18	33.96	26.85	124	0.59
385	4.59	33.987	1.85	26.94	400	4.52	34.00	26.96	115	0.71
488	4.23	34.059	1.20	27.04	500	4.19	34.07	27.05	107	0.82
590	3.92	34.144	0.70	27.14	600	3.89	34.15	27.14	98	0.92
689	3.71	34.223	0.53	27.22	700	3.69	34.23	27.23	91	1.02
786	3.58	34.293	0.46	27.29	800	3.56	34.30	27.30	85	1.11
977	3.12	34.385	0.48	27.41	1000	3.08	34.39	27.42	74	1.27
1172	2.82	34.450	0.44	27.48	1200	2.78	34.46	27.50	67	1.41
1467	2.38	34.531	0.81	27.59	1500	2.33	34.54	27.60	58	1.60
1500	(2.33)a)	(34.539)a)	-	(27.60)						
49	CNAV OSHAWA; June 20, 1959; 1152 GCT; 48°43'N, 136°05'W; sounding, 2300 fm; wind, 210°, 15 kt; weather, haze; sea, slight.									
0	10.80	32.648	6.70	25.00	0	10.80	32.65	25.00	296	0.00
9	10.46	32.641	6.70	25.06	10	10.42	32.64	25.06	291	0.03
19	10.03	32.646	6.68	25.13	20	9.99	32.65	25.14	284	0.06
28	9.63	32.651	6.79	25.20	30	9.54	32.65	25.22	276	0.09
47	8.75	32.688	6.88	25.37	50	8.58	32.70	25.41	258	0.14
71	7.08	32.909	6.83	25.78	75	6.92	32.93	25.82	219	0.20
94	6.60	32.982	6.81	25.91	100	6.56	33.03	25.95	208	0.25
118	6.66	33.242	6.07	26.10	125	6.61	33.35	26.20	184	0.30
142	6.38	33.698	5.13	26.50	150	6.25	33.77	26.57	150	0.35
164	5.97	33.783	4.84	26.62	175	5.79	33.81	26.66	141	0.38
187	5.61	33.826	4.49	26.70	200	5.44	33.84	26.73	135	0.42
228	5.17	33.866	3.61	26.78	250	5.00	33.88	26.81	128	0.48
277	4.84	33.883	3.06	26.83	300	4.70	33.90	26.86	123	0.55
368	4.38	33.994	1.76	26.97	400	4.26	34.03	27.01	110	0.66
458	4.09	34.086	1.12	27.07	500	3.99	34.12	27.11	100	0.77
552	3.90	34.159	0.71	27.15	600	3.80	34.19	27.19	94	0.87
650	3.68	34.231	0.51	27.23	700	3.59	34.26	27.26	88	0.96
752	3.50	34.272	0.46	27.28	800	3.42	34.29	27.30	84	1.05
955	3.14	34.364	0.38	27.39	1000	3.07	34.38	27.41	75	1.21
1148	2.84	34.432	0.38	27.47	1200	2.76	34.45	27.49	68	1.35
1428	2.44	34.499	0.59	27.56						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

50

CNAV OSHAWA; June 20, 1959; 1917 GCT; 49°52'N, 137°01'W; sounding, missing; wind, 200°, 15 kt; weather, fog; sea, moderate.

0	10.70	32.690	6.73	25.05	0	10.70	32.69	25.05	292	0.00
10	10.30	32.690	6.67	25.12	10	10.30	32.69	25.12	285	0.03
19	10.21	32.697	6.68	25.14	20	10.17	32.70	25.15	283	0.06
29	9.54	32.726	6.88	25.28	30	9.49	32.73	25.29	270	0.08
48	8.88	32.753	6.92	25.40	50	8.78	32.76	25.42	258	0.14
72	7.40	32.786	6.88	25.64	75	7.27	32.80	25.67	234	0.20
96	6.71	32.892	6.97	25.82	100	6.64	32.91	25.84	218	0.26
119	(6.46)a)	32.960	6.86	(25.91)	125	6.46	33.00	25.94	209	0.31
142	6.62	33.192	6.00	26.07	150	6.53	33.33	26.19	186	0.36
162	6.24	33.587	5.21	26.43	175	5.95	33.72	26.57	150	0.40
184	5.73	33.756	4.72	26.63	200	5.44	33.82	26.71	136	0.44
228	5.12	33.828	3.93	26.76	250	4.98	33.84	26.78	130	0.51
271	4.96	33.846	3.77	26.79	300	4.83	33.87	26.82	127	0.57
363	4.50	33.963	2.47	26.93	400	4.35	34.00	26.98	112	0.69
454	4.16	34.058	1.34	27.04	500	4.05	34.10	27.09	103	0.80
554	3.96	34.142	0.92	27.13	600	3.84	34.19	27.18	94	0.90
638	3.72	34.237	0.89	27.23	700	3.58	34.27	27.27	87	0.99
736	3.52	34.272	0.62	27.28	800	3.40	34.30	27.31	83	1.08
932	3.19	34.377	0.44	27.39	1000	3.07	34.40	27.42	73	1.24
1130	2.85	34.439	0.55	27.47	1200	2.74	34.46	27.50	67	1.38
1415	2.46	34.505	0.64	27.56						

51

CNAV OSHAWA; June 21, 1959; 0101 GCT; 50°21'N, 135°40'W; sounding, missing; wind, 180°, 20 kt; weather, fog; sea, moderate.

0	10.50	32.583	6.67	25.00	0	10.50	32.58	25.00	296	0.00
10	10.15	32.567	6.67	25.05	10	10.15	32.57	25.05	292	0.03
20	9.75	32.598	6.77	25.14	20	9.75	32.60	25.14	284	0.06
29	8.97	32.646	6.92	25.30	30	8.90	32.65	25.32	267	0.09
49	8.49	32.665	6.92	25.39	50	8.45	32.67	25.40	259	0.14
72	7.04	32.783	6.93	25.69	75	6.93	32.80	25.72	229	0.20
97	6.62	32.933	6.82	25.86	100	6.59	32.96	25.89	214	0.26
121	6.56	33.162	6.33	26.05	125	6.52	33.21	26.10	194	0.31
146	6.20	33.549	4.97	26.40	150	6.17	33.59	26.44	162	0.35
170	6.13	33.732	4.06	26.56	175	6.09	33.76	26.58	148	0.39
194	5.88	33.842	3.46	26.68	200	5.83	33.86	26.70	138	0.43
242	5.66	33.880	2.54	26.73	250	5.62	33.89	26.75	134	0.50
290	5.40	33.968	1.91	26.83	300	5.35	33.98	26.85	124	0.56
387	4.90	34.038	1.28	26.95	400	4.84	34.05	26.96	115	0.68
486	4.48	34.105	0.91	27.05	500	4.43	34.11	27.06	106	0.79
584	4.17	34.170	0.59	27.13	600	4.12	34.18	27.14	98	0.90
687	3.83	34.243	0.52	27.22	700	3.80	34.25	27.23	90	0.99
792	3.65	34.303	0.41	27.29	800	3.63	34.31	27.29	85	1.08
996	3.18	34.373	0.35	27.39	1000	3.17	34.37	27.39	76	1.24
1196	2.84	34.458	0.45	27.49	1200	2.83	34.46	27.49	68	1.39
1496	2.45	34.493	0.57	27.55	1500	2.45	34.49	27.55	62	1.59
1500	(2.45)b)	(34.493)b)	-	(27.55)						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
52	CNAV OSHAWA; June 21, 1959; 0552 GCT; 50°50'N, 134°21'W; sounding, missing; wind, 190°, 10 kt; weather, overcast; sea, slight.									
0	11.10	32.473	6.26	24.81	0	11.10	32.47	24.81	314	0.00
10	11.00	32.465	6.43	24.83	10	11.00	32.47	24.83	314	0.03
20	9.65	32.497	7.00	25.08	20	9.65	32.50	25.08	290	0.06
29	9.30	32.501	7.10	25.14	30	9.25	32.50	25.15	283	0.09
49	7.97	32.577	7.17	25.40	50	7.91	32.58	25.41	258	0.14
73	6.92	32.663	6.85	25.61	75	6.86	32.68	25.63	237	0.21
98	6.54	32.980	6.04	25.91	100	6.51	33.01	25.94	208	0.26
123	(6.20)a)	33.475	4.67	(26.35)	125	6.17	33.50	26.37	168	0.31
147	5.91	33.716	4.09	26.57	150	5.88	33.74	26.59	147	0.35
172	5.76	33.825	3.90	26.68	175	5.73	33.83	26.69	138	0.39
196	5.48	33.882	3.18	26.76	200	5.44	33.89	26.77	131	0.42
245	5.10	33.929	2.32	26.84	250	5.07	33.93	26.84	124	0.48
284	4.96	33.953	2.01	26.87	300	4.90	33.96	26.89	120	0.55
389	4.49	34.031	1.49	26.99	400	4.45	34.04	27.00	111	0.66
482	4.15	34.102	0.91	27.08	500	4.10	34.12	27.10	102	0.77
573	3.97	34.203	0.61	27.18	600	3.91	34.22	27.20	93	0.87
670	3.74	34.261	0.49	27.25	700	3.68	34.28	27.27	87	0.96
767	3.57	34.327	0.47	27.32	800	3.51	34.35	27.34	81	1.04
964	3.16	34.417	-	27.43	1000	3.09	34.43	27.44	72	1.20
1163	2.80	34.448	0.52	27.48	1200	2.74	34.45	27.50	67	1.34
1462	2.40	34.509	0.74	27.57	1500	2.36	34.52	27.58	60	1.53
1500	(2.36)b)	(34.518)b)	-	(27.58)						
53	CNAV OSHAWA; June 21, 1959; 1131 GCT; 51°14'N, 133°04'W; sounding, 2000 fm; wind, 200°, 15 kt; weather, cloudy; sea, slight.									
0	11.90	32.264	6.73	24.51	0	11.90	32.26	24.51	344	0.00
10	11.82	32.248	6.84	24.51	10	11.82	32.25	24.51	344	0.04
19	11.38	32.262	7.08	24.60	20	11.28	32.26	24.62	333	0.07
29	9.84	32.280	6.93	24.88	30	9.71	32.28	24.90	306	0.10
48	(7.99)a)	32.380	6.56	(25.24)	50	7.88	32.39	25.27	272	0.16
72	7.68	32.573	6.30	25.44	75	7.63	32.60	25.47	254	0.22
97	7.22	32.802	5.61	25.68	100	7.18	32.84	25.72	230	0.29
121	7.02	33.193	5.03	26.02	125	6.99	33.26	26.07	196	0.34
146	6.85	33.611	3.71	26.37	150	6.81	33.65	26.40	165	0.38
170	6.52	33.736	3.71	26.51	175	6.47	33.76	26.54	153	0.42
194	6.30	33.869	3.03	26.64	200	6.23	33.89	26.67	141	0.46
242	5.51	33.893	3.17	26.76	250	5.45	33.90	26.77	131	0.53
290	5.42	33.956	2.28	26.82	300	5.38	33.97	26.83	126	0.60
388	4.73	34.007	1.61	26.94	400	4.67	34.02	26.95	115	0.72
486	4.37	34.094	0.88	27.05	500	4.33	34.11	27.06	105	0.83
585	4.12	34.172	0.64	27.14	600	4.08	34.18	27.15	98	0.93
688	3.84	34.233	0.50	27.21	700	3.82	34.24	27.22	91	1.03
792	3.68	34.294	0.47	27.28	800	3.66	34.30	27.28	86	1.12
992	3.17	34.378	0.41	27.40	1000	3.15	34.38	27.40	76	1.28
1189	2.88	34.453	0.46	27.48	1200	2.86	34.46	27.49	68	1.43
1483	2.42	34.510	0.71	27.57	1500	2.39	34.51	27.57	60	1.62
1500	(2.39)b)	(34.511)b)	-	(27.57)						

a) Value interpolated by three-point parabolic method.
b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

CNAV OSHAWA; June 21, 1959; 1739 GCT; 51°47'N, 131°47'W; sounding, 1200 fm; wind, 220°, 10 kt; weather, overcast; sea, slight. 54

0	11.80	32.215	8.22	24.49	0	11.80	32.22	24.49	346	0.00
9	10.89	32.208	7.71	24.65	10	10.77	32.21	24.67	328	0.03
19	9.58	32.265	6.52	24.91	20	9.50	32.27	24.93	304	0.07
28	9.22	32.297	5.89	24.99	30	9.13	32.31	25.02	296	0.10
47	8.24	32.509	5.41	25.31	50	8.09	32.53	25.35	264	0.15
71	7.06	32.613	6.12	25.55	75	6.98	32.65	25.59	241	0.22
95	7.09	32.915	5.37	25.79	100	7.08	32.99	25.85	218	0.27
118	7.03	33.274	4.53	26.08	125	6.96	33.36	26.16	188	0.32
142	6.69	33.550	4.23	26.34	150	6.60	33.61	26.40	166	0.37
165	6.48	33.675	4.03	26.47	175	6.46	33.74	26.52	155	0.41
188	6.50	33.831	3.19	26.59	200	6.53	33.83	26.58	150	0.45
136	5.96	33.930	2.20	26.73	250	6.29	33.87	26.64	144	0.52
286	5.75	33.969	2.07	26.79	300	5.68	33.98	26.80	129	0.59
385	5.10	34.024	1.81	26.91	400	5.03	34.03	26.93	118	0.72
484	4.72	34.079	1.28	27.00	500	4.67	34.09	27.01	110	0.83
581	4.46	34.158	0.78	27.09	600	4.39	34.17	27.11	102	0.94
680	4.01	34.235	0.74	27.20	700	3.95	34.25	27.22	92	1.04
779	3.80	34.289	0.59	27.26	800	3.76	34.30	27.28	87	1.13
985	3.36	34.366	0.53	27.37	1000	3.33	34.37	27.38	78	1.29
1183	2.90	34.433	0.49	27.46	1200	2.87	34.44	27.47	70	1.44
1473	2.42	34.514	0.79	27.57	1500	2.39	34.52	27.58	60	1.64
1500	(2.39)a)	(34.521)a)	-	(27.58)						

CNAV OSHAWA; June 21, 1959; 1954 GCT; 51°55'N, 131°17.5'W; sounding, 1000+ fm; wind, 220°, 5 kt; weather, haze; sea, slight. 55

0	11.20	32.044	6.67	24.46	0	11.20	32.04	24.46	348	0.00
10	10.31	32.114	6.53	24.67	10	10.31	32.11	24.67	328	0.03
19	9.93	32.113	6.29	24.73	20	9.90	32.11	24.74	322	0.07
29	9.80	32.100	6.20	24.75	30	9.78	32.10	24.75	321	0.10
48	9.34	32.178	6.01	24.88	50	9.31	32.19	24.89	308	0.16
73	9.13	32.280	5.97	24.99	75	9.10	32.29	25.00	298	0.24
98	8.70	32.405	5.71	25.16	100	8.65	32.42	25.18	281	0.31
122	8.00	32.703	5.15	25.49	125	7.94	32.73	25.53	249	0.38
147	7.66	32.886	4.60	25.69	150	7.59	32.93	25.73	230	0.44
172	6.87	33.333	3.64	26.15	175	6.82	33.36	26.18	187	0.49
196	6.67	33.407	3.42	26.23	200	6.63	33.43	26.25	180	0.54
246	6.04	33.879	3.12	26.68	250	6.01	33.90	26.70	138	0.62
296	5.90	33.930	2.46	26.74	300	5.88	33.93	26.75	134	0.69
396	5.16	33.976	1.83	26.87	400	5.14	33.98	26.87	123	0.82
495	4.71	34.076	1.05	27.00	500	4.69	34.08	27.00	112	0.93
594	4.42	34.150	0.70	27.09	600	4.40	34.15	27.09	104	1.04
695	4.08	34.232	0.46	27.19	700	4.07	34.24	27.19	95	1.14
796	3.84	34.294	0.47	27.26	800	3.83	34.30	27.27	88	1.24
1000	3.28	34.361	0.44	27.37	1000	3.28	34.36	27.37	79	1.40
1199	2.90	34.428	0.45	27.46	1200	2.90	34.43	27.46	71	1.56
1497	2.29	34.534	0.95	27.60	1500	2.28	34.54	27.60	58	1.75
1500	(2.28)a)	(34.535)a)	-	(27.60)						

a) Value extrapolated by three-point parabolic method.

	OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
56	CNAV OSHAWA; June 21, 1959; 2218 GCT; 51°55'N, 131°03.5'W; sounding, 106 fm; wind, 220°, 5 kt; weather, cloudy; sea, slight.										
	0	11.80	32.010	6.68	24.33	0	11.80	32.01	24.33	361	0.00
	10	10.23	32.143	6.72	24.71	10	10.23	32.14	24.71	325	0.03
	20	9.51	32.210	6.25	24.88	20	9.51	32.21	24.88	309	0.07
	30	9.00	32.338	5.99	25.06	30	9.00	32.34	25.06	292	0.10
	50	7.78	32.681	5.27	25.51	50	7.78	32.68	25.51	249	0.15
	74	7.38	32.906	5.16	25.74	75	7.37	32.92	25.75	226	0.21
	99	7.14	33.161	4.41	25.97	100	7.13	33.17	25.98	205	0.26
	124	7.00	33.222	4.46	26.04	125	6.99	33.23	26.05	199	0.32
	149	6.57	33.513	3.64	26.33	150	6.55	33.53	26.34	171	0.36
	150	(6.55)a)	(33.529)a)	-	(26.34)						
57	CNAV OSHAWA; June 21, 1959; 2355 GCT; 51°58'N, 130°56'W; sounding, 66 fm; wind, 220°, 5 kt; weather, cloudy; sea, slight.										
	0	11.80	31.772	6.65	24.14	0	11.80	31.77	24.14	378	0.00
	10	10.68	31.810	6.60	24.37	10	10.68	31.81	24.37	357	0.04
	20	9.66	31.908	5.70	24.62	20	9.66	31.91	24.62	333	0.07
	30	9.04	31.948	5.52	24.75	30	9.04	31.95	24.75	321	0.10
	40	8.04	32.422	5.21	25.27	50	7.42	32.74	25.61	240	0.16
	75	7.52	32.861	4.21	25.69	75	7.52	32.86	25.69	232	0.22
	100	7.41	32.902	4.06	25.73	100	7.41	32.90	25.73	228	0.28
58	CNAV OSHAWA; June 22, 1959; 0040 GCT; 51°59'N, 130°45'W; sounding, 140 fm; wind, 220°, 8 kt; weather, cloudy; sea, slight.										
	0	13.70	31.719	6.95	23.74	0	13.70	31.72	23.74	417	0.00
	10	12.01	31.713	7.11	24.06	10	12.01	31.71	24.06	386	0.04
	19	10.01	32.131	6.57	24.73	20	9.88	32.16	24.78	318	0.08
	29	9.59	32.215	6.42	24.87	30	9.53	32.23	24.89	308	0.11
	48	7.69	32.679	4.96	25.52	50	7.56	32.72	25.57	243	0.16
	73	7.13	33.205	4.12	26.01	75	7.09	33.24	26.04	199	0.22
	97	6.73	33.480	3.33	26.28	100	6.70	33.50	26.30	174	0.26
	121	6.62	33.534	3.22	26.34	125	6.57	33.56	26.36	169	0.31
	146	6.18	33.753	2.79	26.57	150	6.12	33.78	26.59	147	0.35
	170	5.88	33.866	2.24	26.69	175	5.83	33.88	26.71	136	0.38
	194	5.71	33.903	2.12	26.74	200	5.69	33.90	26.74	133	0.42
	200	(5.69)a)	(33.900)a)	-	(26.74)						
59	CNAV OSHAWA; June 22, 1959; 0200 GCT; 52°00'N, 130°30'W; sounding, 212 fm; wind, 230°, 10 kt; weather, cloudy; sea, slight.										
	0	12.90	31.830	6.96	23.98	0	12.90	31.83	23.98	394	0.00
	10	11.41	32.110	7.19	24.48	10	11.41	32.11	24.48	347	0.04
	20	9.90	32.233	6.73	24.83	20	9.90	32.23	24.83	313	0.07
	30	9.67	32.254	6.62	24.89	30	9.67	32.25	24.89	308	0.10
	50	8.74	32.399	6.51	25.15	50	8.74	32.40	25.15	284	0.16
	75	7.49	32.867	5.33	25.70	75	7.49	32.87	25.70	232	0.23
	99	6.96	33.407	4.85	26.19	100	6.94	33.42	26.21	183	0.28
	124	6.52	33.655	3.10	26.45	125	6.51	33.66	26.45	160	0.32
	149	6.29	33.773	2.76	26.57	150	6.28	33.78	26.57	149	0.36
	199	5.87	33.909	2.19	26.73	175	6.06	33.86	26.67	141	0.40
	248	5.58	33.980	1.89	26.82	200	5.86	33.91	26.73	135	0.43
	348	5.25	34.030	1.51	26.90	250	5.57	33.98	26.82	126	0.50
						300	5.36	34.02	26.88	122	0.56

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; June 22, 1959; 0423 GCT; 51°33'N, 130°17.5'W; sounding, 530 fm; wind, 220°, 15 kt; weather, partly cloudy; sea, slight.										60
0	12.20	32.153	6.83	24.37	0	12.20	32.15	24.37	357	0.00
10	11.74	32.155	6.83	24.45	10	11.74	32.16	24.45	349	0.04
20	11.36	32.166	6.90	24.53	20	11.36	32.17	24.53	342	0.07
30	11.25	32.168	6.18	24.55	30	11.25	32.17	24.55	340	0.10
49	8.34	32.423	6.18	25.22	50	8.24	32.43	25.25	274	0.17
74	7.48	32.664	7.30	25.54	75	7.46	32.67	25.55	246	0.23
99	7.34	32.959	4.36	25.79	100	7.34	32.97	25.80	222	0.29
123	7.42	33.366	4.37	26.10	125	7.41	33.40	26.12	192	0.34
148	7.09	33.694	3.41	26.40	150	7.07	33.71	26.41	164	0.39
173	6.90	33.760	3.96	26.48	175	6.88	33.77	26.49	158	0.43
197	6.67	33.846	3.10	26.58	200	6.64	33.86	26.59	149	0.47
247	6.15	33.951	2.81	26.73	250	6.12	33.95	26.73	135	0.54
296	5.78	33.967	2.51	26.79	300	5.75	33.97	26.79	130	0.60
395	5.20	34.029	2.23	26.90	400	5.18	34.03	26.91	120	0.73
495	4.94	34.069	2.26	26.97	500	4.93	34.07	26.97	115	0.85
595	4.61	34.139	1.91	27.06	600	4.59	34.14	27.06	107	0.96
697	4.23	34.213	1.36	27.16	700	4.22	34.21	27.16	98	1.06
798	4.04	34.265	1.15	27.22	800	4.04	34.27	27.22	93	1.16
900	3.74	34.314	0.91	27.29						
CNAV OSHAWA; June 22, 1959; 0826 GCT; 51°03'N, 129°32'W; sounding, 270 fm; wind, 220°, 1 kt; weather, overcast; sea, calm.										61
0	12.80	32.076	6.90	24.19	0	12.80	32.08	24.19	374	0.00
10	12.04	32.010	7.03	24.28	10	12.04	32.01	24.28	365	0.04
20	10.06	32.039	6.54	24.66	20	10.06	32.04	24.66	330	0.07
30	8.92	32.023	5.98	24.82	30	8.92	32.02	24.82	314	0.10
50	9.14	32.319	6.07	25.02	50	9.14	32.32	25.02	296	0.17
75	7.90	32.670	5.28	25.48	75	7.90	32.67	25.48	252	0.24
100	7.38	33.086	4.27	25.88	100	7.38	33.09	25.88	214	0.29
125	7.06	33.501	3.62	26.25	125	7.06	33.50	26.25	179	0.34
150	6.66	33.832	2.93	26.57	150	6.66	33.83	26.57	150	0.38
174	6.43	33.885	2.79	26.64	175	6.42	33.89	26.64	143	0.42
199	6.30	33.898	2.68	26.67	200	6.29	33.90	26.67	141	0.46
248	5.87	33.958	2.12	26.77	250	5.86	33.96	26.77	132	0.53
297	5.59	33.992	1.86	26.83	300	5.57	33.99	26.83	126	0.59
397	5.14	34.055	1.36	26.93	400	5.13	34.06	26.93	117	0.71
400	(5.13)a)	(34.057)a)	-	(26.93)						
CNAV OSHAWA; June 22, 1959; 1032 GCT; 50°55'N, 129°15.5'W; sounding, 48 fm; wind, calm; weather, haze; sea, calm.										62
0	12.60	32.372	6.97	24.46	0	12.60	32.37	24.46	348	0.00
10	12.36	32.370	7.07	24.50	10	12.36	32.37	24.50	344	0.04
20	11.02	32.381	6.92	24.76	20	11.02	32.38	24.76	320	0.07
30	10.24	32.414	6.54	24.92	30	10.24	32.41	24.92	305	0.10
50	8.65	32.699	5.47	25.39	50	8.65	32.70	25.39	260	0.16
75	8.25	32.921	4.99	25.63	75	8.25	32.92	25.63	238	0.22
CNAV OSHAWA; June 22, 1959; 1155 GCT; 50°48.5'N, 128°59.5'W; sounding, 49 fm; wind, 270°, 5 kt; weather, overcast; sea, calm.										63
0	12.60	32.123	7.75	24.27	0	12.60	32.12	24.27	367	0.00
10	10.71	32.335	6.87	24.78	10	10.71	32.33	24.78	318	0.03
20	9.83	32.454	6.00	25.02	20	9.83	32.45	25.02	296	0.06
30	9.59	32.506	5.81	25.10	30	9.59	32.51	25.10	288	0.10
50	9.55	32.519	5.66	25.11	50	9.55	32.52	25.11	287	0.15
75	9.39	32.600	5.61	25.20	75	9.39	32.60	25.20	279	0.22

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
64	CNAV OSHAWA; June 22, 1959; 1256 GCT; 50°45'N, 128°44.5'W; sounding, 44 fm; wind, 270°, 2 kt; weather, overcast; sea, calm.									
0	12.90	32.410	6.84	24.43	0	12.90	32.41	24.43	351	0.00
10	12.29	32.383	7.11	24.53	10	12.29	32.38	24.53	342	0.04
20	11.47	32.394	6.96	24.69	20	11.47	32.39	24.69	327	0.07
30	10.90	32.413	6.85	24.80	30	10.90	32.41	24.80	316	0.10
50	10.22	32.456	6.61	24.95	50	10.22	32.46	24.95	302	0.16
60	10.20	32.459	6.54	24.96						
65	CNAV OSHAWA; June 22, 1959; 1455 GCT; 50°46.5'N, 128°29.5'W; sounding, 45 fm; wind, 270°, 7 kt; weather, overcast; sea, slight.									
0	11.00	32.257	6.26	24.66	0	11.00	32.26	24.66	329	0.00
10	10.56	32.302	6.31	24.78	10	10.56	32.30	24.78	318	0.03
20	10.48	32.337	6.20	24.82	20	10.48	32.34	24.82	315	0.06
30	10.44	32.341	6.10	24.83	30	10.44	32.34	24.83	314	0.10
50	10.15	32.406	6.00	24.93	50	10.15	32.41	24.93	305	0.16
75	9.93	32.439	5.81	24.99	75	9.93	32.44	24.99	299	0.23
66	CNAV OSHAWA; June 22, 1959; 1515 GCT; 50°59'N, 128°26'W; sounding, missing; wind, 270°, 5 kt; weather, overcast; sea, slight.									
0	13.30	27.760	7.64	20.77	0	13.30	27.76	20.77	701	0.00
10	10.91	31.955	6.71	24.45	10	10.91	31.95	24.45	350	0.05
20	10.05	32.139	5.68	24.73	20	10.05	32.14	24.73	322	0.09
30	9.46	32.177	5.40	24.86	30	9.46	32.18	24.86	310	0.12
49	9.11	32.385	5.10	25.08	50	9.08	32.40	25.09	289	0.18
74	8.07	32.793	4.12	25.55	75	8.00	32.83	25.59	242	0.24
79	7.70	32.977	3.70	25.75						
67	CNAV OSHAWA; June 22, 1959; 1724 GCT; 51°22'N, 128°36'W; sounding, 114 fm; wind, 020°, 3 kt; weather, overcast; sea, calm.									
0	13.50	30.906	6.96	23.15	0	13.50	30.91	23.15	473	0.00
2	13.21	30.988	6.95	23.27	10	12.38	31.21	23.60	430	0.04
6	13.17	30.990	6.96	23.28	20	10.57	31.50	24.15	378	0.09
10	12.38	31.212	7.02	23.60	30	10.04	31.67	24.37	357	0.12
20	10.57	31.496	6.61	24.15	50	9.12	31.91	24.71	325	0.19
30	10.04	31.668	6.49	24.37	75	8.07	32.24	25.12	286	0.27
50	9.12	31.911	5.99	24.71	100	7.50	32.85	25.68	233	0.33
75	8.07	32.242	5.42	25.12	125	6.81	33.49	26.28	177	0.38
100	7.50	32.852	4.29	25.68	150	6.38	33.80	26.57	149	0.43
125	6.81	33.493	2.76	26.28	175	6.12	33.91	26.70	138	0.46
150	6.38	33.795	2.26	26.57	200	6.12	33.92	26.71	137	0.50
175	6.12	33.908	1.99	26.70						
195	6.10	33.928	1.91	26.72						
200	(6.12)a)	(33.923)a)	-	(26.71)						
68	CNAV OSHAWA; June 22, 1959; 1900 GCT; 51°30.5'N, 128°42.5'W; sounding, 22 fm; wind, 300°, 3 kt; weather, overcast; sea, calm.									
0	12.80	31.435	7.02	23.70	0	12.80	31.44	23.70	421	0.00
2	13.02	31.400	6.86	23.63	10	10.67	31.60	24.21	372	0.04
6	12.90	31.395	6.96	23.65	20	10.04	31.67	24.37	357	0.08
10	10.67	31.603	6.59	24.21	30	9.70	31.75	24.49	346	0.11
20	10.04	31.672	6.24	24.37						
35	9.64	31.787	6.08	24.53						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; June 22, 1959; 1954 GCT; 51°39'N, 128°42'W; sounding, 20 fm; wind, 300°, 5 kt; weather, slight rain showers; sea, slight.										69
0	14.00	30.910	6.70	23.06	0	14.00	30.91	23.06	482	0.00
2	13.80	31.092	6.81	23.24	10	11.90	31.39	23.83	408	0.04
6	12.06	31.414	6.99	23.82	20	9.98	31.62	24.34	360	0.08
10	11.90	31.395	7.04	23.83	30	9.53	31.70	24.48	347	0.12
20	9.98	31.621	6.28	24.34						
35	9.86	31.682	6.26	24.41						
CNAV OSHAWA; June 22, 1959; 2104 GCT; 51°47.5'N, 128°32.5'W; sounding, 76 fm; wind, 320°, 5 kt; weather, cloudy; sea, slight.										70
0	14.20	28.931	6.95	21.49	0	14.20	28.93	21.49	632	0.00
2	14.36	28.784	6.92	21.35	10	11.64	30.75	23.39	451	0.05
6	13.13	30.088	7.54	22.59	20	10.46	31.27	23.99	393	0.10
10	11.64	30.755	7.19	23.39	30	10.60	31.43	24.09	384	0.14
20	10.46	31.274	6.10	23.99	50	9.12	31.71	24.55	340	0.21
30	10.60	31.432	6.40	24.09	75	7.98	32.33	25.20	279	0.29
50	9.12	31.711	5.78	24.55	100	7.56	32.79	25.62	239	0.35
75	7.98	32.326	5.25	25.20	125	7.04	33.33	26.12	192	0.40
100	7.56	32.787	4.30	25.62						
124	7.06	33.309	2.68	26.10						
125	(7.04)a)	(33.332)a)	-	(26.12)						
CNAV OSHAWA; June 23, 1959; 0002 GCT; 52°13'N, 129°12'W; sounding, 90 fm; wind, 280°, 10 kt; weather, partly cloudy; sea, slight.										71
0	14.40	30.932	6.82	22.99	0	14.40	30.93	22.99	488	0.00
2	14.24	30.931	6.68	23.02	10	12.58	31.12	23.50	440	0.05
6	13.79	30.946	6.83	23.13	20	11.55	31.42	23.91	400	0.09
10	12.58	31.123	6.94	23.50	30	9.99	31.62	24.34	360	0.13
20	11.55	31.416	7.05	23.91	50	8.70	32.05	24.88	309	0.19
30	9.99	31.616	6.43	24.34	75	7.58	32.69	25.55	246	0.26
50	8.70	32.049	5.55	24.88	100	7.29	33.05	25.86	216	0.32
75	7.58	32.692	4.36	25.55	125	6.61	33.53	26.34	171	0.37
100	7.29	33.048	3.80	25.86	150	6.49	33.60	26.41	165	0.41
125	6.61	33.530	2.62	26.34						
149	6.48	33.605	2.45	26.41						
150	(6.49)a)	(33.600)a)	-	(26.41)						
CNAV OSHAWA; June 23, 1959; 0107 GCT; 52°12.5'N, 128°54'W; sounding, 68 fm; wind, 280°, 10 kt; weather, partly cloudy; sea, slight.										72
0	15.30	30.125	6.62	22.18	0	15.30	30.13	22.18	566	0.00
2	15.01	30.098	6.78	22.22	10	12.90	31.38	23.63	427	0.05
6	14.04	31.335	7.00	23.37	20	10.27	31.53	24.22	371	0.09
10	12.90	31.376	7.31	23.63	30	10.36	31.90	24.50	345	0.13
20	10.27	31.528	6.64	24.22	50	9.16	32.01	24.78	319	0.19
30	10.36	31.903	6.51	24.50	75	7.83	32.44	25.31	268	0.27
50	9.16	32.010	5.87	24.78	100	7.54	32.86	25.68	233	0.33
75	7.83	32.443	5.03	25.31						
100	7.54	32.861	3.84	25.68						
110	7.34	33.073	3.36	25.88						

a) Value extrapolated by three-point parabolic method.

POG

CS-59-2

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
73	CNAV OSHAWA; June 23, 1959; 0216 GCT; 52°12.5'N, 128°42.5'W; sounding, 140 fm; wind, 300°, 10 kt; weather, partly cloudy; sea, slight.									
0	13.80	30.430	7.09	22.73	0	13.80	30.43	22.73	514	0.00
2	13.48	29.574	7.14	22.13	10	12.16	31.24	23.67	424	0.05
6	13.37	29.605	7.14	22.18	20	10.51	31.42	24.10	383	0.09
10	12.16	31.240	7.15	23.67	30	10.16	31.62	24.31	363	0.12
20	10.51	31.423	6.30	24.10	50	9.51	31.77	24.53	342	0.20
30	10.16	31.619	6.35	24.31	75	8.19	31.95	24.88	309	0.28
50	9.51	31.768	6.10	24.53	100	7.65	32.53	25.41	259	0.35
75	8.19	31.952	5.52	24.88	125	7.10	33.20	26.01	202	0.41
100	7.65	32.531	3.89	25.41	150	6.98	33.32	26.12	192	0.46
124	7.11	33.186	3.05	26.00	175	6.76	33.52	26.31	174	0.50
149	6.99	33.311	2.98	26.11	200	6.62	33.62	26.41	166	0.55
174	6.77	33.518	2.63	26.31	250	6.49	33.72	26.50	158	0.63
199	6.62	33.620	2.62	26.41						
269	6.50	33.718	2.18	26.50						
74	CNAV OSHAWA; June 23, 1959; 0415 GCT; 52°16'N, 128°34'W; sounding, 140 fm; wind, 270°, 10 kt; weather, missing; sea, missing. [a]									
0	13.00	29.625	7.58	22.26	0	13.00	29.63	22.26	558	0.00
2	12.90	29.630	7.47	22.29	10	12.06	30.01	22.73	513	0.05
6	12.73	29.656	7.62	22.34	20	10.96	31.13	23.80	412	0.10
10	12.06	30.007	6.94	22.73	30	10.60	31.32	24.01	392	0.14
20	10.96	31.132	6.36	23.80	50	8.41	31.67	24.63	333	0.21
30	10.60	31.323	6.28	24.01	75	7.84	32.35	25.24	275	0.29
50	8.41	31.674	4.57	24.63	100	7.24	33.10	25.91	212	0.35
75	7.84	32.351	4.37	25.24	125	6.94	33.40	26.19	185	0.40
100	7.24	33.097	3.39	25.91	150	6.78	33.52	26.30	175	0.45
125	6.94	33.399	2.66	26.19	175	6.65	33.57	26.36	170	0.49
150	6.78	33.516	2.53	26.30	200	6.56	33.62	26.41	165	0.53
175	6.65	33.568	2.56	26.36	250	6.53	33.73	26.50	157	0.61
199	(6.57)b)	33.619	2.42	(26.41)						
238	6.52	33.702	2.45	26.48						
250	(6.53)c)	(33.728)c)	-	(26.50)						
75	CNAV OSHAWA; June 24, 1959; 1036 GCT; 52°24'N, 130°00'W; sounding, 140 fm; wind, 320°, 5 kt; weather, cloudy; sea, calm.									
0	13.40	31.587	6.63	23.70	0	13.40	31.59	23.70	421	0.00
2	13.42	31.597	6.61	23.70	10	11.18	31.62	24.14	379	0.04
6	12.10	31.522	6.89	23.90	20	10.54	31.71	24.32	362	0.08
10	11.18	31.619	6.75	24.14	30	10.04	31.77	24.45	349	0.11
20	10.54	31.709	6.47	24.32	50	9.24	32.00	24.76	321	0.18
30	10.04	31.773	6.28	24.45	75	8.38	32.35	25.16	282	0.26
50	9.24	31.999	5.88	24.76	100	7.72	32.73	25.55	246	0.32
75	8.38	32.349	5.55	25.16	125	6.97	33.29	26.10	194	0.38
100	7.72	32.727	4.64	25.55	150	6.50	33.64	26.44	162	0.42
125	6.97	33.291	3.31	26.10	175	6.18	33.80	26.61	146	0.46
150	6.50	33.643	2.66	26.44	200	5.90	33.89	26.71	137	0.50
175	6.18	33.803	2.45	26.61	250	5.58	33.96	26.81	128	0.56
199	5.91	33.885	2.28	26.71						
244	5.60	33.959	1.77	26.80						
250	(5.58)b)	(33.961)b)	-	(26.81)						

a) See page 771 for time series, Station 74, Milbanke Sound.
b) Value interpolated by three-point parabolic method.
c) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

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CNAV OSHAWA; June 24, 1959; 1430 GCT; 53°00'N, 129°56'W; sounding, 136 fm; wind, calm; weather, overcast; sea, calm.

0	11.60	30.549	7.06	23.23	0	11.60	30.55	23.23	465	0.00
2	10.29	30.765	6.66	23.63	10	10.26	31.11	23.90	402	0.04
6	10.36	31.031	6.40	23.82	20	9.26	31.22	24.15	378	0.08
10	10.26	31.113	6.30	23.90	30	8.98	31.47	24.38	356	0.12
20	9.26	31.223	5.77	24.15	50	9.14	31.81	24.63	333	0.19
30	8.98	31.469	5.41	24.38	75	8.50	32.07	24.92	305	0.27
50	9.14	31.813	5.46	24.63	100	7.16	33.00	25.84	218	0.34
75	8.50	32.070	5.06	24.92	125	6.83	33.29	26.12	192	0.39
100	7.16	32.997	3.54	25.84	150	6.50	33.51	26.33	172	0.43
125	6.83	33.293	3.08	26.12	175	6.40	33.56	26.38	168	0.48
150	6.50	33.508	2.68	26.33	200	6.32	33.61	26.44	162	0.52
175	6.40	33.555	2.56	26.38						
200	6.32	33.615	2.47	26.44						

77

CNAV OSHAWA; June 24, 1959; 1520 GCT; 52°58'N, 129°45.5'W; sounding, 110 fm; wind, calm; weather, overcast; sea, calm.

0	11.40	30.497	6.46	23.23	0	11.40	30.50	23.23	466	0.00
2	10.60	30.683	6.16	23.51	10	9.56	31.06	23.98	394	0.04
6	10.21	30.897	6.33	23.74	20	9.20	31.24	24.17	376	0.08
10	9.56	31.064	5.88	23.98	30	9.05	31.38	24.30	363	0.12
20	9.20	31.241	5.66	24.17	50	8.64	31.75	24.66	330	0.19
30	9.05	31.382	5.94	24.30	75	7.31	32.91	25.75	226	0.26
50	8.64	31.755	5.20	24.66	100	6.88	33.23	26.06	197	0.31
75	7.31	32.909	3.63	25.75	125	6.48	33.50	26.33	172	0.36
100	6.88	33.226	3.20	26.06	150	6.46	33.53	26.35	170	0.40
125	6.48	33.501	2.73	26.33						
150	6.46	33.526	2.62	26.35						
174	(6.80)a)	33.615	2.38	(26.38)						

78

CNAV OSHAWA; June 24, 1959; 1726 GCT; 53°00'N, 130°15.5'W; sounding, 116 fm; wind, 310°, 3 kt; weather, intermittent slight drizzle; sea, calm.[b]

0	12.10	31.181	7.06	23.63	0	12.10	31.18	23.63	427	0.00
2	11.92	31.189	7.15	23.67	10	10.38	31.37	24.08	384	0.04
6	10.96	31.305	6.84	23.93	20	9.79	31.49	24.28	366	0.08
10	10.38	31.369	6.59	24.08	30	9.38	31.69	24.49	346	0.11
19	9.84	31.479	6.17	24.26	50	9.13	31.87	24.67	328	0.18
29	9.41	31.673	5.94	24.48	75	8.15	32.29	25.15	284	0.26
48	9.18	31.847	5.87	24.65	100	7.62	32.64	25.50	251	0.33
72	8.24	32.244	5.66	25.10	125	7.08	33.15	25.98	206	0.38
96	7.71	32.569	4.98	25.43	150	6.79	33.47	26.27	178	0.43
120	7.16	33.073	3.78	25.90	175	6.27	33.77	26.57	150	0.47
144	6.89	33.392	3.30	26.19						
168	6.39	33.711	2.09	26.51						
192	6.04	33.838	2.09	26.65						

79

CNAV OSHAWA; June 24, 1959; 2108 GCT; 53°15'N, 131°13'W; sounding, 16 fm; wind, 220°, 10 kt; weather, slight rain; sea, smooth.[c]

0	10.80	31.698	6.52	24.26	0	10.80	31.70	24.26	367	0.00
2	10.60	31.670	6.46	24.28	10	10.37	31.81	24.43	352	0.04
6	10.46	31.777	6.47	24.38	20	10.34	31.95	24.54	341	0.07
10	10.37	31.811	6.49	24.43						
20	10.34	31.947	6.49	24.54						

80

CNAV OSHAWA; June 24, 1959; 2208 GCT; 53°13.5'N, 131°28'W; sounding, 16 fm; wind, 220°, 10 kt; weather, intermittent slight drizzle; sea, slight.

0	12.10	32.083	7.85	24.33	0	12.10	32.08	24.33	360	0.00
2	10.88	32.056	7.85	24.53	10	10.83	32.07	24.55	340	0.04
6	10.83	32.057	8.10	24.54	20	10.83	32.08	24.55	340	0.07
10	10.83	32.067	7.91	24.55						
25	10.83	32.071	7.81	24.55						

a) Value extrapolated by three-point parabolic method.
b) The following nitrate values were obtained for this station: 0 m, 0.76; 10, 6.19; 48, 10.02; 96, 17.30; 192, 34.40 µg at/L.
c) The following nitrate values were obtained for this station: 0 m, 4.00; 10, 3.77; 20, 3.56 µg at/L.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
81 CNAV OSHAWA; June 24, 1959; 2306 GCT; 53°15'N, 131°37.5'W; sounding, 12 fm; wind, 270°, 10 kt; weather, overcast; sea, slight.										
0	11.80	31.889	7.47	24.24	0	11.80	31.89	24.24	370	0.00
2	11.70	31.876	7.65	24.24	10	11.71	31.88	24.24	369	0.04
6	11.70	31.879	7.56	24.25	20	(11.60)	(31.87)	(24.26)	(368)	(0.07)
10	11.71	31.875	6.45	24.24						
15	11.68	31.873	7.67	24.24						
82 CNAV OSHAWA; June 25, 1959; 0212 GCT; 53°37.5'N, 130°54'W; sounding, 32 fm; wind, calm; weather, overcast; sea, calm.										
0	13.20	31.401	6.96	23.59	0	13.20	31.40	23.59	431	0.00
2	12.92	31.397	7.08	23.64	10	11.72	31.40	23.87	404	0.04
6	12.28	31.397	7.08	23.77	20	10.44	31.47	24.15	378	0.08
10	11.72	31.403	7.05	23.87	30	13.76	31.54	23.59	432	0.12
20	10.44	31.465	6.59	24.15	50	11.78	31.45	23.90	403	0.21
30	13.76	31.539	8.28	23.59						
50	11.78	31.447	6.70	23.90						
83 CNAV OSHAWA; June 25, 1959; 0331 GCT; 53°37.5'N, 130°44'W; sounding, 80 fm; wind, 140°, 5 kt; weather, overcast; sea, calm.[a)]										
0	12.90	31.135	7.28	23.45	0	12.90	31.14	23.45	445	0.00
2	12.86	31.112	7.40	23.44	10	11.50	31.13	23.70	420	0.04
6	12.38	31.102	7.69	23.52	20	10.13	31.52	24.24	370	0.08
10	11.50	31.133	7.60	23.70	30	9.73	31.72	24.46	349	0.12
20	10.13	31.519	6.27	24.24	50	9.22	31.90	24.68	328	0.19
30	9.73	31.719	6.17	24.46	75	8.66	32.10	24.92	305	0.27
50	9.22	31.901	5.91	24.68						
75	8.66	32.099	5.27	24.92						
89	7.83	32.483	4.22	25.35						
84 CNAV OSHAWA; June 25, 1959; 0420 GCT; 53°37.5'N, 130°36'W; sounding, 36 fm; wind, 140°, 5 kt; weather, overcast; sea, calm.										
0	12.70	31.185	7.41	23.52	0	12.70	31.19	23.52	438	0.00
2	12.51	31.159	7.54	23.54	10	10.29	31.41	24.13	380	0.04
7	11.16	31.379	6.65	23.95	20	10.46	31.45	24.13	380	0.08
11	9.99	31.407	6.79	24.17	30	10.80	31.45	24.07	386	0.12
21	10.78	31.451	6.49	24.08	50	10.44	31.52	24.19	375	0.19
31	10.76	31.446	6.48	24.08						
51	10.41	31.523	6.32	24.20						
61	9.44	31.846	5.63	24.61						
85 CNAV OSHAWA; June 25, 1959; 0735 GCT; 53°55.5'N, 130°58.5'W; sounding, 42 fm; wind, 270°, 1 kt; weather, overcast; sea, calm.										
0	11.30	30.601	8.06	23.33	0	11.30	30.60	23.33	456	0.00
2	10.86	30.655	8.24	23.45	10	10.23	30.81	23.67	424	0.04
6	10.38	30.777	7.36	23.62	20	10.12	31.15	23.95	397	0.08
10	10.23	30.807	6.42	23.67	30	10.34	31.41	24.12	382	0.12
20	10.12	31.151	6.58	23.95	50	9.04	31.88	24.70	326	0.20
30	10.34	31.405	6.43	24.12						
50	9.04	31.883	4.80	24.70						
70	7.78	32.414	4.30	25.30						
86 CNAV OSHAWA; June 25, 1959; 0927 GCT; 54°18.5'N, 131°14'W; sounding, 46 fm; wind, 180°, 10 kt; weather, intermittent moderate rain; sea, slight.										
0	11.90	31.240	6.11	23.71	0	11.90	31.24	23.71	419	0.00
2	11.12	31.466	6.25	24.03	10	9.24	32.05	24.80	316	0.04
6	9.38	31.981	5.58	24.72	20	8.82	32.16	24.94	302	0.07
10	9.24	32.049	5.94	24.80	30	8.42	32.16	25.00	297	0.10
20	8.82	32.155	5.76	24.94	50	8.21	32.36	25.19	279	0.16
30	8.42	32.157	5.49	25.00						
50	8.21	32.360	4.87	25.19						
70	7.49	32.577	4.68	25.47						

a) The following nitrate values were obtained for this station: 0 m, 0.27; 10, 0.22; 50, 7.92; 89, 19.90 μg at/L.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

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CNAV OSHAWA; June 25, 1959; 1023 GCT; 54°18.5'N, 131°04.5'W; sounding, 58 fm; wind, 180°, 10 kt; weather, intermittent moderate rain; sea, slight.

0	10.40	31.899	7.18	24.49	0	10.40	31.90	24.49	345	0.00
2	10.07	31.979	6.25	24.61	10	9.68	32.05	24.73	323	0.03
6	10.04	32.029	6.33	24.65	20	9.44	32.08	24.79	317	0.07
10	9.68	32.053	6.12	24.73	30	9.08	32.11	24.87	310	0.10
20	9.44	32.085	5.92	24.79	50	8.84	32.15	24.94	303	0.16
30	9.08	32.112	5.93	24.87	75	8.02	32.34	25.21	278	0.23
50	8.84	32.152	5.80	24.94						
75	8.02	32.339	4.90	25.21						
90	7.36	32.551	4.36	25.47						

88

CNAV OSHAWA; June 25, 1959; 1123 GCT; 54°19'N, 130°52'W; sounding, 76 fm; wind, 180°, 5 kt; weather, intermittent moderate rain; sea, calm.

0	10.90	30.195	6.59	23.08	0	10.90	30.19	23.08	480	0.00
2	10.75	30.266	6.56	23.16	10	10.92	30.41	23.24	464	0.05
6	10.85	30.340	6.63	23.20	20	10.26	30.52	23.44	445	0.09
10	10.92	30.409	6.56	23.24	30	8.90	31.31	24.27	367	0.13
20	10.26	30.522	6.32	23.44	50	8.49	31.71	24.64	331	0.20
30	8.90	31.307	5.67	24.27	75	8.18	32.06	24.97	301	0.28
50	8.49	31.707	5.43	24.64	100	7.73	32.16	25.11	288	0.36
75	8.18	32.064	5.04	24.97	125	7.66	32.24	25.18	282	0.43
99	7.74	32.158	4.66	25.10						
124	7.66	32.235	4.60	25.18						
125	(7.66)a)	(32.238)a)	-	(25.18)						

89

CNAV OSHAWA; June 25, 1959; 1155 GCT; 54°21'N, 130°50'W; sounding, 64 fm; wind, 180°, 5 kt; weather, intermittent moderate rain; sea, calm.

0	10.90	24.609	6.63	18.76	0	10.90	24.61	18.76	895	0.00
2	9.75	28.565	6.21	22.00	10	9.09	29.64	22.94	493	0.07
6	9.35	29.232	6.21	22.58	20	8.77	30.88	23.96	396	0.11
10	9.09	29.640	6.09	22.94	30	8.71	31.05	24.10	383	0.15
20	8.77	30.883	5.73	23.96	50	8.54	31.40	24.39	355	0.23
30	8.71	31.052	5.63	24.10						
60	8.43	31.571	5.48	24.55						

90

CNAV OSHAWA; June 25, 1959; 1353 GCT; 54°10.5'N, 130°32.5'W; sounding, 66 fm; wind, calm; weather, intermittent slight drizzle; sea, calm.

0	10.30	21.194	6.43	16.20	0	10.30	21.19	16.20	1141	0.00
2	9.86	25.382	6.45	19.51	10	9.64	30.06	23.18	470	0.08
6	10.51	27.213	6.66	20.83	20	9.33	31.03	23.98	394	0.12
10	9.64	30.058	6.37	23.18	30	8.89	31.44	24.37	357	0.16
20	9.33	31.026	6.06	23.98	50	8.36	31.58	24.56	339	0.23
30	8.89	31.435	5.75	24.37	75	7.71	31.90	24.90	307	0.31
50	8.36	31.580	5.38	24.56	100	7.53	32.02	25.03	295	0.39
75	7.71	31.897	4.94	24.90						
99	7.53	32.023	4.72	25.03						
100	(7.53)a)	(32.024)a)	-	(25.03)						

91

CNAV OSHAWA; June 26, 1959; 1625 GCT; 54°19.5'N, 130°37'W; sounding, 110 fm; wind, 270°, 1 kt; weather, fog in patches; sea, calm.

0	11.40	20.193	6.81	15.27	0	11.40	20.19	15.27	1232	0.00
2	10.78	20.247	6.77	15.40	10	9.72	27.22	20.96	682	0.10
6	10.10	24.993	6.30	19.18	20	8.93	30.81	23.88	404	0.15
10	9.72	27.222	6.16	20.96	30	8.93	31.13	24.13	380	0.19
20	8.93	30.809	5.92	23.88	50	8.33	31.65	24.62	334	0.26
30	8.93	31.134	5.99	24.13	75	7.54	32.01	25.01	296	0.34
50	8.33	31.648	5.32	24.62	100	6.75	32.52	25.52	248	0.41
75	7.54	32.007	5.17	25.01	125	6.53	32.69	25.69	233	0.47
100	6.75	32.517	4.00	25.52	150	6.50	32.76	25.74	228	0.53
125	6.53	32.691	3.80	25.69	175	6.48	32.80	25.77	225	0.58
150	6.50	32.759	3.69	25.74						
190	6.48	32.803	3.20	25.78						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
92	CNAV OSHAWA; June 26, 1959; 1828 GCT; 54°38.5'N, 130°59'W; sounding, 264 fm; wind, 280°, 10 kt; weather, cloudy; sea, slight.									
0	13.80	22.625	7.66	16.73	0	13.80	22.63	16.73	1090	0.00
2	13.86	22.629	7.75	16.72	10	10.08	27.13	20.84	694	0.09
6	12.73	23.410	7.68	17.53	20	8.67	30.58	23.73	418	0.14
10	10.08	27.134	6.53	20.84	30	8.39	31.43	24.44	350	0.18
20	8.67	30.576	5.70	23.73	50	8.18	31.79	24.75	321	0.25
30	8.39	31.432	5.52	24.44	75	6.60	32.27	25.35	264	0.32
50	8.18	31.791	5.39	24.75	100	6.52	32.87	25.83	219	0.38
75	6.60	32.273	4.18	25.35	125	6.44	33.00	25.94	209	0.44
100	6.52	32.867	3.78	25.83	150	6.36	33.03	25.98	206	0.49
125	(6.44)a)	32.995	3.58	(25.94)	175	6.34	33.08	26.01	202	0.54
150	6.36	33.031	3.58	25.98	200	6.38	33.06	26.00	204	0.59
175	6.34	33.077	3.48	26.01	250	6.36	33.10	26.03	202	0.70
199	6.38	33.063	3.73	26.00	300	6.33	33.13	26.06	200	0.80
249	6.36	33.097	3.78	26.03	400	6.38	33.16	26.07	200	1.00
299	6.33	33.133	3.35	26.06						
398	6.38	33.159	3.29	26.07						
447	6.34	33.161	3.34	26.08						
93	CNAV OSHAWA; June 27, 1959; 0140 GCT; 54°39'N, 130°47'W; sounding, 146 fm; wind, 270°, 2 kt; weather, cloudy; sea, calm.									
0	14.30	23.072	7.79	16.98	0	14.30	23.07	16.98	1066	0.00
2	13.69	23.152	7.68	17.16	10	9.24	29.31	22.66	520	0.08
6	10.48	27.821	6.56	21.31	20	9.13	30.88	23.90	402	0.13
10	9.24	29.315	6.25	22.66	30	8.87	31.29	24.26	368	0.16
20	9.13	30.879	5.96	23.90	50	8.02	31.82	24.80	317	0.23
29	8.90	31.254	5.79	24.23	75	6.83	32.69	25.65	236	0.30
49	8.07	31.786	5.15	24.77	100	6.68	32.81	25.76	226	0.36
73	6.88	32.655	3.93	25.61	125	6.55	32.97	25.90	213	0.42
98	6.69	32.793	3.74	25.75	150	6.53	32.99	25.92	211	0.47
122	6.56	32.957	3.68	25.89	175	6.41	33.09	26.02	202	0.52
147	6.54	32.985	3.52	25.92	200	6.36	33.13	26.05	199	0.57
171	6.42	33.081	3.40	26.01						
220	6.38	33.119	3.40	26.04						
94	CNAV OSHAWA; June 27, 1959; 0232 GCT; 54°44'N, 130°52'W; sounding, 144 fm; wind, 270°, 7 kt; weather, cloudy; sea, slight.									
0	13.50	23.470	8.16	17.44	0	13.50	23.47	17.44	1022	0.00
2	11.89	24.543	7.99	18.54	10	9.58	28.12	21.68	614	0.08
6	11.55	25.111	8.15	19.04	20	9.88	29.38	22.62	524	0.14
10	9.58	28.119	6.40	21.68	30	9.00	30.50	23.62	428	0.19
20	9.88	29.379	6.33	22.62	50	8.90	31.40	24.34	360	0.27
30	9.00	30.499	5.90	23.62	75	7.17	32.42	25.39	260	0.34
50	8.90	31.400	5.83	24.34	100	6.65	32.82	25.77	225	0.40
75	7.17	32.424	4.35	25.39	125	6.48	32.97	25.91	211	0.46
100	6.65	32.818	3.75	25.77	150	6.43	33.05	25.98	206	0.51
125	6.48	32.973	3.59	25.91	175	6.38	33.10	26.02	201	0.56
150	6.43	33.047	3.57	25.98	200	6.36	33.13	26.05	199	0.61
175	6.38	33.097	3.52	26.02						
229	6.36	33.131	3.41	26.05						
95	CNAV OSHAWA; June 27, 1959; 0325 GCT; 54°47.5'N, 130°59.5'W; sounding, 55 fm; wind, 210°, 5 kt; weather, cloudy; sea, slight.									
0	13.40	25.215	7.72	18.79	0	13.40	25.22	18.79	891	0.00
2	13.22	25.204	7.73	18.82	10	11.50	26.77	20.33	744	0.08
6	12.42	25.562	8.08	19.24	20	8.90	29.55	22.90	497	0.14
10	11.50	26.766	6.97	20.33	30	8.16	30.82	24.00	393	0.19
20	8.90	29.551	6.02	22.90	50	8.56	31.81	24.71	325	0.26
30	8.16	30.820	5.51	24.00	75	7.30	32.58	25.49	251	0.33
50	8.56	31.807	5.59	24.71						
80	6.82	32.671	4.03	25.63						

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

CNAV OSHAWA; June 27, 1959; 0438 GCT; 54°46'N, 131°18.5'W; sounding, 90 fm; wind, 200°, 10 kt; weather, fog in patches; sea, slight. 96

0	13.40	27.204	7.41	20.32	0	13.40	27.20	20.32	744	0.00
2	13.17	27.445	7.25	20.55	10	11.17	30.18	23.02	485	0.06
6	12.23	28.638	7.56	21.64	20	10.25	30.99	23.81	411	0.11
10	11.17	30.179	6.96	23.02	30	9.68	31.51	24.30	364	0.14
20	10.25	30.990	6.47	23.81	50	9.05	31.82	24.64	331	0.22
30	9.68	31.508	6.17	24.30	75	7.90	32.27	25.17	282	0.29
50	9.05	31.817	5.77	24.64	100	6.93	32.73	25.67	235	0.36
75	7.90	32.272	5.06	25.17	125	6.52	33.01	25.94	209	0.41
100	6.93	32.733	4.13	25.67	150	6.26	33.20	26.12	192	0.46
125	6.52	33.014	3.65	25.94						
150	6.26	33.202	3.39	26.12						

CNAV OSHAWA; June 27, 1959; 0602 GCT; 54°43.5'N, 131°40.5'W; sounding, 232 fm; wind, 200°, 5 kt; weather, partly cloudy; sea, calm. 97

0	12.70	29.517	6.56	22.24	0	12.70	29.52	22.24	560	0.00
2	11.94	29.517	6.47	22.38	10	10.84	30.11	23.03	485	0.05
6	11.59	29.706	6.50	22.58	20	9.97	31.20	24.02	391	0.10
10	10.84	30.110	6.08	23.03	30	9.32	31.52	24.37	357	0.13
20	9.97	31.199	5.98	24.02	50	8.82	31.83	24.69	327	0.20
30	9.32	31.517	5.63	24.37	75	7.38	32.47	25.40	260	0.28
50	8.82	31.833	5.18	24.69	100	6.55	32.80	25.77	225	0.34
75	7.38	32.468	3.89	25.40	125	6.26	33.15	26.08	195	0.39
99	6.57	32.782	3.89	25.75	150	5.95	33.50	26.39	166	0.44
124	6.27	33.135	3.31	26.07	175	5.89	33.56	26.45	161	0.48
149	5.96	33.488	2.73	26.39	200	5.75	33.65	26.54	153	0.52
173	5.90	33.550	2.77	26.44	250	5.63	33.74	26.63	145	0.59
198	5.76	33.646	2.65	26.54	300	5.70	33.71	26.60	149	0.67
297	5.70	33.711	2.27	26.59	400	5.64	33.74	26.63	147	0.82
396	5.64	33.741	2.12	26.62						
400	(5.64)a)	(33.741)a)	-	(26.63)						

CNAV OSHAWA; June 27, 1959; 0631 GCT; 54°42'N, 131°53.5'W; sounding, 200 fm; wind, 200°, 5 kt; weather, partly cloudy; sea, slight. 98

0	12.30	29.321	7.06	22.16	0	12.30	29.32	22.16	568	0.00
10	11.54	30.133	6.94	22.92	10	11.54	30.13	22.92	495	0.05
20	10.07	30.979	6.43	23.83	20	10.07	30.98	23.83	409	0.10
30	9.46	31.368	6.33	24.23	30	9.46	31.37	24.23	370	0.14
50	8.47	31.910	5.64	24.80	50	8.47	31.91	24.80	316	0.21
75	7.12	32.327	4.62	25.32	75	7.12	32.33	25.32	267	0.28
100	6.76	32.820	3.96	25.76	100	6.76	32.82	25.76	226	0.34
125	6.26	33.156	3.44	26.09	125	6.26	33.16	26.09	195	0.40
150	6.12	33.330	3.09	26.24	150	6.12	33.33	26.24	180	0.44
175	5.98	33.493	2.72	26.39	175	5.98	33.49	26.39	167	0.49
200	5.88	33.593	2.68	26.48	200	5.88	33.59	26.48	159	0.53
249	5.81	33.683	2.57	26.56	250	5.81	33.68	26.56	152	0.60
297	5.77	33.725	2.71	26.60	300	5.76	33.73	26.60	148	0.68
323	5.66	33.756	2.71	26.63						

a) Value extrapolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
99	CNAV OSHAWA; June 27, 1959; 0940 GCT; 54°25.5'N, 132°12'W; sounding, 184 fm; wind, 270°, 15 kt; weather, partly cloudy; sea, slight.									
0	12.10	29.916	6.86	22.65	0	12.10	29.92	22.65	520	0.00
10	10.29	31.210	6.63	23.97	10	10.29	31.21	23.97	395	0.05
20	9.38	31.742	6.18	24.53	20	9.38	31.74	24.53	341	0.08
29	9.06	31.882	5.88	24.69	30	9.02	31.90	24.71	325	0.12
49	8.37	32.130	5.37	24.99	50	8.33	32.14	25.01	297	0.18
74	7.16	32.567	5.36	25.51	75	7.12	32.58	25.52	248	0.25
98	6.58	32.977	4.15	25.90	100	6.55	33.00	25.93	210	0.30
123	6.37	33.114	3.91	26.04	125	6.35	33.13	26.05	198	0.36
148	6.13	33.374	3.43	26.27	150	6.11	33.39	26.29	176	0.40
172	5.90	33.586	3.06	26.47	175	5.88	33.60	26.49	157	0.44
197	5.75	33.689	2.75	26.57	200	5.74	33.70	26.58	149	0.48
245	5.60	33.771	2.60	26.65	250	5.59	33.78	26.66	142	0.56
297	5.51	33.831	2.59	26.71	300	5.51	33.83	26.71	137	0.63
300	(5.51)a)	(33.834)a)	–	(26.71)						
100	CNAV OSHAWA; June 27, 1959; 1202 GCT; 54°10.5'N, 132°28.5'W; sounding, 43 fm; wind, 280°, 18 kt; weather, overcast; sea, moderate.									
0	11.60	30.303	6.58	23.04	0	11.60	30.30	23.04	483	0.00
2	11.48	30.260	6.53	23.03	10	10.70	30.95	23.70	421	0.04
6	11.36	30.339	6.50	23.11	20	10.02	31.47	24.22	372	0.08
10	10.70	30.949	6.48	23.70	30	9.50	31.90	24.64	332	0.12
20	10.02	31.465	6.43	24.22	50	8.48	32.41	25.20	279	0.18
30	9.50	31.900	6.15	24.64						
50	8.48	32.413	5.42	25.20						
70	7.84	32.618	4.87	25.45						
101	CNAV OSHAWA; June 27, 1959; 1408 GCT; 54°18'N, 133°03.5'W; sounding, 252 fm; wind, 300°, 15 kt; weather, cloudy; sea, moderate.									
0	10.20	31.917	6.49	24.54	0	10.20	31.92	24.54	341	0.00
10	10.00	31.850	6.59	24.52	10	10.00	31.85	24.52	343	0.03
19	9.70	31.937	6.54	24.63	20	9.67	31.95	24.65	331	0.07
29	9.42	32.051	6.40	24.77	30	9.39	32.06	24.78	318	0.10
48	8.98	32.174	5.85	24.93	50	8.93	32.18	24.95	302	0.16
73	8.34	32.279	5.47	25.11	75	8.26	32.30	25.14	285	0.24
97	7.04	32.601	4.56	25.55	100	6.92	32.65	25.60	241	0.30
122	6.36	33.089	3.77	26.02	125	6.30	33.14	26.07	197	0.36
147	6.04	33.417	3.13	26.32	150	6.01	33.45	26.35	170	0.40
171	5.85	33.589	2.91	26.48	175	5.83	33.61	26.50	156	0.45
196	5.82	33.681	2.86	26.56	200	5.81	33.69	26.57	150	0.48
243	5.72	33.781	2.82	26.65	250	5.70	33.79	26.66	142	0.56
292	5.56	33.816	2.70	26.69	300	5.53	33.82	26.70	138	0.63
416	5.06	33.947	2.05	26.86	400	5.13	33.93	26.83	127	0.76
102	CNAV OSHAWA; June 27, 1959; 1523 GCT; 54°28.5'N, 133°03.5'W; sounding, 62 fm; wind, 330°, 20 kt; weather, cloudy; sea, slight.									
0	9.80	32.110	6.18	24.75	0	9.80	32.11	24.75	320	0.00
2	9.58	32.086	6.08	24.77	10	8.78	32.28	25.05	292	0.03
6	9.26	32.029	6.15	24.78	20	8.31	32.47	25.27	271	0.06
10	8.78	32.279	5.69	25.05	30	12.96	32.56	24.54	342	0.09
20	8.31	32.475	5.35	25.27	50	11.97	32.81	24.92	306	0.16
30	12.96	32.563	5.08	24.54						
59	7.04	32.955	4.13	25.83						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

103

CNAV OSHAWA; June 27, 1959; 1613 GCT; 54°34'N, 132°57'W; sounding, 210 fm; wind, 330°, 25 kt; weather, cloudy; sea, moderate.

0	11.20	30.997	6.66	23.65	0	11.20	31.00	23.65	425	0.00
2	10.96	30.835	6.60	23.57	10	10.13	31.03	23.86	406	0.04
6	10.92	30.877	6.77	23.61	20	9.41	32.15	24.84	312	0.08
10	10.13	31.027	6.56	23.86	30	7.67	32.55	25.42	257	0.11
19	9.53	32.067	6.40	24.76	50	7.43	32.79	25.65	236	0.16
29	7.78	32.517	5.70	25.38	75	6.93	32.95	25.84	218	0.21
48	7.47	32.773	4.66	25.62	100	6.64	33.06	25.96	207	0.27
73	6.96	32.937	4.26	25.82	125	6.41	33.15	26.06	197	0.32
98	6.66	33.047	3.94	25.95	150	6.29	33.26	26.16	188	0.37
122	6.43	33.139	3.66	26.05	175	6.18	33.37	26.27	178	0.41
147	6.30	33.243	3.58	26.15	200	6.06	33.46	26.35	170	0.46
171	6.20	33.355	3.39	26.25	250	5.88	33.61	26.50	158	0.54
195	6.08	33.446	3.24	26.34	300	5.76	33.72	26.60	149	0.62
293	5.79	33.707	2.94	26.58						
352	5.46	33.825	2.70	26.71						

104

CNAV OSHAWA; June 27, 1959; 1718 GCT; 54°39'N, 132°53'W; sounding, 96 fm; wind, 330°, 25 kt; weather, cloudy; sea, moderate.

0	(11.77)a)	30.629	6.36	(23.27)	0	11.77	30.63	23.27	462	0.00
2	10.96	30.639	6.34	23.42	10	9.81	30.76	23.70	420	0.04
6	10.00	30.635	6.40	23.57	20	9.12	31.10	24.07	385	0.08
9	9.86	30.732	6.30	23.67	30	8.56	31.50	24.47	347	0.12
19	9.18	31.060	5.89	24.03	50	8.33	32.19	25.05	293	0.19
28	8.64	31.427	5.55	24.40	75	7.49	32.60	25.49	252	0.25
47	8.40	32.111	5.60	24.97	100	6.96	32.73	25.66	235	0.32
71	7.60	32.557	5.17	25.44	125	6.50	32.99	25.93	210	0.37
94	7.09	32.684	4.68	25.61	150	6.34	33.29	26.19	186	0.42
117	6.60	32.911	4.18	25.85						
141	6.40	33.162	3.93	26.07						
150	6.34	33.294	3.76	26.19						

105

CNAV OSHAWA; June 27, 1959; 2009 GCT; 55°00'N, 133°17.5'W; sounding, 46 fm; wind, 310°, 25 kt; weather, partly cloudy; sea, moderate.

0	11.70	30.983	6.59	23.55	0	11.70	30.98	23.55	435	0.00
2	11.08	30.966	6.63	23.65	10	10.62	31.00	23.76	415	0.04
6	11.10	30.969	6.63	23.65	20	9.54	31.59	24.39	355	0.08
10	10.62	31.002	6.58	23.76	30	9.16	31.67	24.51	344	0.12
20	9.54	31.586	6.28	24.39						
30	9.16	31.672	5.94	24.51						

106

CNAV OSHAWA; June 27, 1959; 2126 GCT; 55°00.5'N, 133°38.5'W; sounding, 52 fm; wind, 320°, 23 kt; weather, partly cloudy; sea, moderate.

0	11.30	31.172	6.63	23.77	0	11.30	31.17	23.77	414	0.00
2	11.08	31.187	6.56	23.82	10	11.10	31.18	23.81	410	0.04
6	11.10	31.174	6.58	23.81	20	10.86	31.27	23.92	400	0.08
10	11.10	31.179	6.58	23.81	30	9.54	31.72	24.49	345	0.12
20	10.86	31.271	6.58	23.92	50	8.00	32.15	25.06	292	0.18
30	9.54	31.724	6.58	24.49	75	7.18	32.48	25.43	256	0.25
50	8.00	32.146	5.70	25.06						
75	7.18	32.478	5.09	25.43						
85	6.70	32.767	4.47	25.72						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
107	CNAV OSHAWA; June 27, 1959; 2245 GCT; 55°00.5'N, 133°59.5'W; sounding, 80 fm; wind, 320°, 25 kt; weather, partly cloudy; sea, moderate.									
0	11.70	31.482	6.78	23.94	0	11.70	31.48	23.94	398	0.00
2	11.46	31.463	6.81	23.97	10	11.46	31.46	23.96	396	0.04
6	11.48	31.454	6.95	23.96	20	9.88	31.62	24.36	358	0.08
10	11.46	31.457	6.92	23.96	30	8.86	31.76	24.63	332	0.11
19	10.01	31.602	6.68	24.32	50	8.78	31.89	24.74	322	0.18
29	8.93	31.749	6.41	24.61	75	8.36	32.04	24.92	306	0.26
48	8.80	31.879	6.28	24.73	100	7.79	32.24	25.16	283	0.33
72	8.42	32.017	6.14	24.90	125	6.94	32.61	25.57	244	0.40
96	7.90	32.194	5.88	25.11						
129	6.78	32.689	5.64	25.65						
108	CNAV OSHAWA; June 28, 1959; 0311 GCT; 55°00'N, 135°00'W; sounding, 1400 fm; wind, 320°, 25 kt; weather, partly cloudy; sea, rough.									
0	12.40	32.153	6.96	24.33	0	12.40	32.15	24.33	361	0.00
10	12.03	32.139	6.93	24.39	10	12.03	32.14	24.39	355	0.04
19	12.00	32.139	7.09	24.39	20	11.84	32.14	24.42	352	0.07
28	9.38	32.168	6.87	24.87	30	8.97	32.18	24.94	303	0.10
47	8.02	32.320	6.73	25.19	50	7.85	32.34	25.23	275	0.16
70	7.04	32.461	6.59	25.44	75	6.90	32.49	25.48	252	0.23
92	6.64	32.606	6.40	25.60	100	6.54	32.67	25.67	234	0.29
115	6.40	32.824	6.04	25.81	125	6.67	33.07	25.97	206	0.34
128	6.80	33.161	4.75	26.02	150	7.17	33.43	26.18	187	0.40
162	(7.20)a)	33.407	3.96	(26.16)	175	7.11	33.53	26.27	178	0.44
185	6.95	33.644	3.39	26.38	200	6.82	33.74	26.47	160	0.48
231	6.65	33.793	3.10	26.54	250	6.39	33.84	26.61	147	0.56
277	5.88	33.890	2.98	26.71	300	5.61	33.92	26.77	132	0.63
371	5.25	33.973	2.16	26.85	400	5.06	33.99	26.89	121	0.76
466	4.66	34.022	1.52	26.96	500	4.55	34.04	26.99	113	0.88
561	4.50	34.090	1.03	27.03	600	4.38	34.12	27.07	106	0.99
658	4.14	34.168	0.58	27.13	700	4.02	34.20	27.17	97	1.09
753	3.91	34.227	0.52	27.20	800	3.79	34.25	27.23	91	1.18
938	3.42	34.308	0.52	27.32	1000	3.29	34.33	27.35	81	1.36
1123	3.10	34.386	0.49	27.41	1200	2.96	34.41	27.44	72	1.51
1382	2.59	34.466	0.84	27.52						
109	CNAV OSHAWA; June 28, 1959; 0805 GCT; 55°00'N, 136°00'W; sounding, 1500+ fm; wind, 320°, 25 kt; weather, cloudy; sea, moderate.									
0	12.30	32.143	6.80	24.34	0	12.30	32.14	24.34	360	0.00
9	12.16	32.126	6.78	24.35	10	12.06	32.13	24.37	357	0.04
19	10.44	32.144	7.12	24.67	20	10.26	32.15	24.71	325	0.07
28	8.72	32.187	7.05	24.98	30	8.44	32.20	25.03	294	0.10
46	7.51	32.300	6.74	25.25	50	7.34	32.33	25.29	270	0.16
69	6.98	32.463	6.53	25.45	75	6.87	32.50	25.49	251	0.22
92	6.64	32.603	6.48	25.60	100	6.55	32.67	25.67	234	0.28
117	6.39	32.857	5.99	25.83	125	6.50	32.98	25.92	211	0.34
140	6.94	33.257	4.32	26.08	150	7.07	33.40	26.17	188	0.39
161	(7.14)a)	33.529	3.42	(26.26)	175	7.12	33.64	26.35	171	0.44
184	7.04	33.683	3.00	26.40	200	6.92	33.76	26.47	160	0.48
230	6.61	33.826	2.62	26.57	250	6.50	33.86	26.61	147	0.56
276	6.43	33.883	2.46	26.64	300	6.29	33.91	26.67	142	0.63
368	5.70	33.946	2.11	26.78	400	5.45	33.97	26.83	128	0.76
460	4.97	34.003	1.49	26.91	500	4.77	34.03	26.96	116	0.89
556	4.60	34.078	1.13	27.01	600	4.43	34.11	27.05	107	1.00
650	4.24	34.140	0.64	27.10	700	4.08	34.18	27.14	99	1.10
746	3.95	34.209	0.60	27.18	800	3.79	34.25	27.23	92	1.20
938	3.42	34.329	0.42	27.33	1000	3.28	34.36	27.37	79	1.37
1127	3.06	34.393	0.48	27.42	1200	2.92	34.40	27.44	73	1.53
1400	2.56	34.371	0.71	27.44						

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; June 28, 1959; 1407 GCT; 54°00'N, 136°00'W; sounding, 1500+ fm; wind, 320°, 20 kt; weather, partly cloudy; sea, moderate.										110
0	11.50	32.231	6.93	24.55	0	11.50	32.23	24.55	339	0.00
9	11.30	32.231	6.95	24.59	10	11.16	32.23	24.62	333	0.03
18	9.13	32.256	7.43	24.97	20	8.86	32.26	25.02	295	0.06
27	8.54	32.305	6.90	25.10	30	8.34	32.33	25.15	283	0.09
45	7.34	32.514	6.48	25.44	50	7.12	32.55	25.50	250	0.15
68	6.70	32.641	6.35	25.62	75	6.58	32.71	25.70	231	0.21
88	6.43	32.895	5.66	25.86	100	6.38	33.03	25.97	206	0.26
111	6.42	33.136	5.18	26.05	125	6.65	33.37	26.20	184	0.31
130	6.78	33.462	4.23	26.26	150	6.60	33.64	26.43	163	0.36
158	6.37	33.669	3.70	26.48	175	6.13	33.81	26.62	145	0.40
180	6.06	33.849	3.15	26.66	200	5.82	33.93	26.75	133	0.43
227	5.54	33.904	2.52	26.77	250	5.39	33.92	26.80	129	0.50
273	5.30	33.934	2.22	26.82	300	5.10	33.95	26.85	124	0.56
368	4.38	33.952	2.11	26.94	400	4.26	33.98	26.97	113	0.68
464	4.32	34.075	1.05	27.04	500	4.27	34.11	27.08	104	0.79
562	4.14	34.175	0.61	27.14	600	4.03	34.20	27.17	96	0.89
662	3.80	34.231	0.52	27.22	700	3.72	34.25	27.24	90	0.98
764	3.64	34.276	0.45	27.27	800	3.57	34.29	27.29	86	1.07
970	3.19	34.359	0.55	27.38	1000	3.13	34.37	27.39	76	1.24
1175	2.84	34.432	0.45	27.47	1200	2.80	34.44	27.48	69	1.38
1471	2.38	34.503	0.84	27.56	1500	2.34	34.51	27.57	60	1.58
1500	(2.34)a)	(34.508)a)	-	(27.57)						
CNAV OSHAWA; June 28, 1959; 1801 GCT; 54°02'N, 135°01'W; sounding, missing; wind, 320°, 15 kt; weather, cloudy; sea, moderate.										111
0	11.70	32.271	6.79	24.55	0	11.70	32.27	24.55	340	0.00
10	11.48	32.258	6.83	24.58	10	11.48	32.26	24.58	337	0.03
20	11.48	32.260	6.74	24.58	20	11.48	32.26	24.58	337	0.07
29	8.93	32.290	6.68	25.03	30	8.72	32.30	25.07	290	0.10
49	7.30	32.551	6.58	25.47	50	7.24	32.56	25.49	251	0.15
73	6.58	32.698	6.36	25.69	75	6.54	32.71	25.70	231	0.21
98	6.33	32.905	5.91	25.88	100	6.32	32.93	25.90	212	0.27
122	6.34	33.206	4.83	26.12	125	6.33	33.25	26.15	189	0.32
147	6.21	33.569	4.00	26.42	150	6.18	33.60	26.45	161	0.36
172	5.88	33.753	3.21	26.60	175	5.85	33.77	26.62	145	0.40
196	5.66	33.846	2.90	26.71	200	5.63	33.86	26.72	136	0.44
245	5.46	33.904	2.65	26.78	250	5.42	33.91	26.78	130	0.51
294	4.90	33.926	2.60	26.86	300	4.85	33.93	26.87	122	0.57
392	4.53	34.029	1.57	26.98	400	4.50	34.04	26.99	112	0.69
489	4.24	34.102	1.06	27.07	500	4.21	34.11	27.08	104	0.80
586	4.05	34.192	0.63	27.16	600	4.01	34.20	27.17	96	0.90
683	3.69	34.248	0.60	27.24	700	3.65	34.26	27.25	88	0.99
781	3.52	34.305	0.58	27.30	800	3.48	34.31	27.31	83	1.08
976	3.11	34.386	0.55	27.41	1000	3.06	34.39	27.42	74	1.24
1167	2.73	34.437	0.65	27.48	1200	2.67	34.45	27.49	67	1.38
1455	2.31	34.506	0.85	27.57	1500	2.26	34.52	27.58	59	1.57
1500	(2.26)a)	(34.516)a)	-	(27.58)						

a) Value extrapolated by three-point parabolic method.

POG

CS-59-2

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
112	CNAV OSHAWA; June 28, 1959; 2111 GCT; 53°58'N, 134°00'W; sounding, 1500+ fm; wind, 320°, 20 kt; weather, partly cloudy; sea, moderate.									
0	12.20	32.275	6.72	24.46	0	12.20	32.28	24.46	348	0.00
10	11.74	32.252	6.93	24.53	10	11.74	32.25	24.53	342	0.04
20	11.38	32.258	6.98	24.60	20	11.38	32.26	24.60	335	0.07
29	9.70	32.286	6.88	24.91	30	9.55	32.29	24.93	304	0.10
49	7.98	32.413	6.57	25.27	50	7.92	32.42	25.29	270	0.16
74	7.11	32.697	5.98	25.61	75	7.09	32.71	25.63	238	0.22
98	7.11	33.057	4.91	25.90	100	7.11	33.08	25.92	211	0.28
122	7.03	33.353	4.33	26.14	125	7.01	33.39	26.17	187	0.33
148	6.80	33.662	3.49	26.41	150	6.78	33.68	26.43	163	0.37
172	6.48	33.814	3.09	26.58	175	6.45	33.83	26.59	148	0.41
196	6.26	33.865	2.97	26.65	200	6.22	33.87	26.66	142	0.45
245	5.81	33.919	2.58	26.74	250	5.77	33.92	26.75	133	0.52
293	5.39	33.927	2.45	26.80	300	5.34	33.93	26.81	128	0.58
396	4.80	33.998	1.53	26.93	400	4.78	34.00	26.93	117	0.71
493	4.38	34.093	0.90	27.05	500	4.36	34.10	27.05	106	0.82
595	4.14	34.174	0.60	27.14	600	4.13	34.18	27.14	99	0.92
696	3.88	34.217	0.45	27.20	700	3.87	34.22	27.20	94	1.02
796	3.70	34.277	0.37	27.26	800	3.69	34.28	27.27	88	1.11
997	3.20	34.357	0.39	27.38	1000	3.19	34.36	27.38	78	1.28
1198	2.76	34.433	0.46	27.48	1200	2.76	34.43	27.48	69	1.43
1500	2.28	34.525	0.85	27.59	1500	2.28	34.53	27.59	58	1.62
113	CNAV OSHAWA; June 29, 1959; 0003 GCT; 53°59.5'N, 133°37'W; sounding, 240 fm; wind, 320°, 16 kt; weather, partly cloudy; sea, moderate.									
0	12.10	32.368	6.31	24.55	0	12.10	32.37	24.55	340	0.00
10	10.92	32.372	6.87	24.77	10	10.92	32.37	24.77	319	0.03
20	10.47	32.374	7.00	24.85	20	10.47	32.37	24.85	312	0.06
29	8.09	32.436	6.49	25.27	30	7.90	32.44	25.30	268	0.09
49	7.28	32.590	6.30	25.51	50	7.25	32.60	25.52	248	0.15
74	6.95	32.669	6.54	25.61	75	6.93	32.68	25.62	238	0.21
99	6.24	32.926	6.09	25.91	100	6.23	32.94	25.92	210	0.26
124	6.37	33.256	5.10	26.15	125	6.37	33.27	26.16	188	0.31
148	6.36	33.680	3.97	26.49	150	6.35	33.70	26.51	156	0.36
173	(6.18)a)	33.818	3.29	(26.62)	175	6.16	33.83	26.63	144	0.40
198	5.82	33.890	2.89	26.72	200	5.79	33.89	26.73	135	0.43
248	5.33	33.924	2.31	26.81	250	5.31	33.93	26.81	128	0.50
297	4.91	33.969	1.86	26.89	300	4.89	33.97	26.89	120	0.56
421	4.55	34.051	1.25	27.00	400	4.54	34.04	26.99	112	0.68
114	CNAV OSHAWA; June 29, 1959; 0118 GCT; 54°00'N, 133°15'W; sounding, 28 fm; wind, 320°, 18 kt; weather, partly cloudy; sea, moderate.									
0	13.10	32.360	6.80	24.35	0	13.10	32.36	24.35	358	0.00
10	11.64	32.315	6.78	24.59	10	11.64	32.31	24.59	336	0.04
20	11.08	32.323	7.00	24.70	20	11.08	32.32	24.70	326	0.07
30	9.56	32.361	7.03	24.99	30	9.56	32.36	24.99	298	0.10
40	8.71	32.433	6.83	25.18						

a) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

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CNAV OSHAWA; June 29, 1959; 0450 GCT; 53°18'N, 132°51'W; sounding, 130 fm; wind, 320°, 10 kt; weather, partly cloudy; sea, slight.

0	11.00	32.144	6.87	24.58	0	11.00	32.14	24.58	337	0.00
2	10.74	32.134	6.94	24.61	10	10.75	32.14	24.61	334	0.03
6	10.77	32.129	6.98	24.60	20	9.44	32.28	24.94	302	0.07
10	10.75	32.137	6.88	24.61	30	9.13	32.30	25.01	296	0.10
20	9.44	32.281	6.67	24.94	50	8.16	32.39	25.23	276	0.15
30	9.13	32.300	6.67	25.01	75	7.22	32.60	25.52	248	0.22
50	8.16	32.392	6.57	25.23	100	6.74	32.88	25.81	221	0.28
75	7.22	32.596	6.05	25.52	125	6.70	33.27	26.12	192	0.33
100	6.74	32.880	5.53	25.81	150	6.48	33.52	26.35	171	0.38
125	6.70	33.267	4.33	26.12	175	6.18	33.52	26.39	167	0.42
150	6.48	33.521	3.53	26.35	200	5.87	33.83	26.67	141	0.46
174	6.19	33.518	3.11	26.38						
199	5.88	33.813	2.78	26.65						
200	(5.87)a)	(33.831)a)	–	(26.67)						

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CNAV OSHAWA; June 29, 1959; 0554 GCT; 53°15'N, 133°02'W; sounding, 325 fm; wind, 320°, 10 kt; weather, partly cloudy; sea, slight.

0	11.70	32.208	6.79	24.50	0	11.70	32.21	24.50	344	0.00
10	11.64	32.195	6.83	24.50	10	11.64	32.19	24.50	344	0.04
19	10.83	32.200	6.82	24.65	20	10.72	32.20	24.67	328	0.07
29	9.46	32.263	6.94	24.93	30	9.36	32.27	24.95	302	0.10
49	8.76	32.329	6.58	25.09	50	8.72	32.33	25.10	288	0.16
73	7.65	32.472	6.48	25.36	75	7.58	32.49	25.39	261	0.23
98	7.08	32.743	5.69	25.65	100	7.04	32.77	25.68	233	0.29
122	6.74	33.089	4.65	25.97	125	6.71	33.14	26.01	202	0.35
146	6.61	33.520	3.65	26.33	150	6.61	33.56	26.36	169	0.39
170	6.74	33.653	3.47	26.42	175	6.70	33.68	26.44	162	0.43
195	6.35	33.807	3.03	26.59	200	6.28	33.83	26.62	146	0.47
293	5.38	33.939	2.36	26.81	250	5.70	33.97	26.80	129	0.54
392	4.84	34.027	1.48	26.94	300	5.33	33.95	26.82	127	0.61
490	4.50	34.068	1.32	27.01	400	4.80	34.03	26.95	115	0.73
500	(4.48)a)	(34.070)a)	–	(27.02)	500	4.48	34.07	27.02	110	0.84

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CNAV OSHAWA; June 29, 1959; 0720 GCT; 53°11'N, 133°19'W; sounding, missing; wind, 320°, 10 kt; weather, partly cloudy; sea, slight.

0	12.00	32.265	6.81	24.49	0	12.00	32.27	24.49	345	0.00
7	11.92	32.221	6.80	24.47	10	11.91	32.21	24.47	348	0.04
16	11.94	32.226	6.75	24.47	20	11.58	32.23	24.54	341	0.07
24	10.99	32.240	6.83	24.65	30	10.33	32.26	24.78	318	0.10
42	9.16	32.336	6.60	25.03	50	8.54	32.38	25.16	282	0.16
63	7.78	32.455	6.27	25.33	75	7.40	32.56	25.47	253	0.23
84	7.30	32.660	6.26	25.56	100	7.08	32.93	25.80	222	0.29
104	7.04	33.006	5.05	25.87	125	6.82	33.36	26.18	187	0.34
126	6.81	33.378	4.27	26.19	150	6.61	33.68	26.45	160	0.38
143	(6.66)b)	33.615	3.62	(26.40)	175	6.45	33.79	26.56	151	0.42
171	6.48	33.770	3.27	26.54	200	6.18	33.86	26.65	142	0.46
215	5.98	33.882	2.89	26.69	250	5.81	33.91	26.74	135	0.53
259	5.80	33.911	2.59	26.74	300	5.54	33.94	26.79	130	0.60
351	5.10	33.973	1.73	26.87	400	4.82	34.00	26.93	118	0.72
442	4.62	34.027	1.27	26.97	500	4.43	34.07	27.02	109	0.84
533	4.37	34.093	0.91	27.05	600	4.20	34.14	27.10	102	0.94
628	4.13	(34.159)b)	0.57	(27.13)	700	3.98	34.21	27.18	96	1.04
722	3.94	34.220	0.54	27.19	800	3.73	34.27	27.25	89	1.14
917	3.32	34.335	0.46	27.35	1000	3.20	34.35	27.37	78	1.31
1107	3.18	34.349	0.42	27.37	1200	3.03	34.38	27.41	76	1.46
1400	2.51	34.497	0.70	27.55						

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
118	CNAV OSHAWA; June 29, 1959; 1857 GCT; 51°33'N, 130°18'W; sounding, 510 fm; wind, 320°, 10 kt; weather, overcast; sea, slight.									
0	12.80	32.011	6.95	24.14	0	12.80	32.01	24.14	378	0.00
8	12.49	31.971	6.93	24.17	10	12.26	31.99	24.23	371	0.04
17	10.94	32.123	6.98	24.57	20	10.63	32.15	24.65	331	0.07
26	10.34	32.175	6.73	24.71	30	9.98	32.22	24.81	316	0.10
43	8.40	32.443	6.17	25.23	50	7.94	32.54	25.38	262	0.16
65	7.64	32.732	5.47	25.57	75	7.50	32.85	25.68	233	0.23
88	7.51	32.993	4.80	25.79	100	7.32	33.20	25.98	205	0.28
110	7.09	33.399	3.78	26.17	125	6.58	33.68	26.46	160	0.33
122	6.66	33.651	3.21	26.42	150	6.25	33.37	26.26	179	0.37
154	(6.26)a)	33.229	4.25	(26.14)	175	6.58	33.37	26.21	184	0.42
178	6.66	33.414	3.86	26.24	200	6.60	33.60	26.39	167	0.46
223	6.11	33.819	2.57	26.63	250	5.83	33.94	26.76	133	0.54
268	5.67	33.965	1.95	26.80	300	5.39	34.02	26.88	122	0.60
358	4.96	34.029	1.22	26.93	400	4.79	34.06	26.98	113	0.72
452	4.72	34.100	0.93	27.02	500	4.60	34.13	27.05	107	0.83
547	4.49	34.156	0.63	27.09	600	4.33	34.19	27.13	100	0.93
641	4.18	34.222	0.54	27.17	700	4.06	34.25	27.21	93	1.03
738	4.01	34.269	0.49	27.23						
119	CNAV OSHAWA; June 29, 1959; 2248 GCT; 51°03'N, 129°31'W; sounding, 236 fm; wind, 290°, 15 kt; weather, partly cloudy; sea, slight.									
0	13.50	32.090	6.76	24.06	0	13.50	32.09	24.06	386	0.00
10	13.12	32.028	6.84	24.09	10	13.12	32.03	24.09	383	0.04
20	10.12	32.240	6.59	24.80	20	10.12	32.24	24.80	316	0.07
30	8.98	32.383	6.22	25.10	30	8.98	32.38	25.10	288	0.10
50	8.26	32.528	5.95	25.32	50	8.26	32.53	25.32	267	0.16
75	7.52	32.906	4.73	25.72	75	7.52	32.91	25.72	229	0.22
100	7.05	33.485	3.56	26.24	100	7.05	33.48	26.24	180	0.27
125	6.86	33.651	3.27	26.40	125	6.86	33.65	26.40	166	0.32
149	6.56	33.832	3.02	26.58	150	6.55	33.84	26.58	148	0.36
174	(6.31)a)	33.850	2.88	(26.63)	175	6.30	33.85	26.63	144	0.39
199	6.12	33.919	2.83	26.71	200	6.11	33.92	26.71	137	0.43
249	5.78	33.963	2.15	26.78	250	5.77	33.96	26.78	130	0.50
299	5.46	34.003	1.77	26.85	300	5.45	34.00	26.85	124	0.56
348	5.14	34.043	1.71	26.92						
120	CNAV OSHAWA; June 30, 1959; 0329 GCT; 51°00.5'N, 127°50'W; sounding, 76 fm; wind, 290°, 5 kt; weather, partly cloudy; sea, slight.									
0	11.80	31.655	7.32	24.05	0	11.80	31.66	24.05	387	0.00
2	11.27	31.645	7.35	24.14	10	9.50	31.76	24.53	342	0.04
6	10.62	31.704	6.58	24.30	20	9.12	31.85	24.66	330	0.07
10	9.50	31.757	6.12	24.53	30	9.12	31.96	24.74	322	0.10
20	9.12	31.847	5.12	24.66	50	8.88	32.10	24.89	308	0.17
30	9.12	31.958	5.10	24.74	75	8.04	32.51	25.34	266	0.24
50	8.88	32.099	4.75	24.89	100	6.82	33.48	26.27	178	0.29
75	8.04	32.512	3.86	25.34	125	5.22	33.72	26.66	140	0.33
100	6.82	33.478	2.64	26.27						
125	(5.22)b)	33.724	2.44	(26.66)						
121	CNAV OSHAWA; June 30, 1959; 0533 GCT; 50°52.5'N, 127°18.5'W; sounding, 64 fm; wind, 290°, 2 kt; weather, partly cloudy; sea, calm.									
0	10.70	30.961	7.95	23.71	0	10.70	30.96	23.71	420	0.00
2	10.29	30.953	7.98	23.77	10	10.06	30.96	23.82	410	0.04
6	10.28	30.952	7.95	23.77	20	9.20	31.17	24.11	382	0.08
10	10.06	30.960	7.46	23.82	30	9.14	31.35	24.27	367	0.12
19	9.25	31.147	5.34	24.09	50	8.81	31.74	24.62	334	0.19
29	9.15	31.332	5.15	24.25	75	8.32	32.35	25.17	282	0.27
48	8.85	31.694	4.81	24.58	100	7.99	32.56	25.38	262	0.34
72	8.37	32.296	4.17	25.12						
96	8.03	32.551	3.80	25.37						
100	(7.99)b)	(32.560)b)	-	(25.38)						

a) Value interpolated by three-point parabolic method.

b) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

122

CNAV OSHAWA; June 30, 1959; 0600 GCT; 50°49.5'N, 127°20.5'W; sounding, 84 fm; wind, 290°, 2 kt; weather, partly cloudy; sea, calm.

0	11.10	30.872	7.68	23.57	0	11.10	30.87	23.57	433	0.00
2	11.02	30.823	9.41	23.55	10	9.30	31.21	24.13	379	0.04
6	11.01	30.854	9.23	23.57	20	9.29	31.33	24.23	370	0.08
10	9.30	31.213	5.43	24.13	30	9.04	31.40	24.32	362	0.12
19	9.30	31.325	5.03	24.22	50	8.83	31.70	24.59	337	0.18
29	9.06	31.393	4.95	24.31	75	8.52	32.21	25.03	295	0.26
49	8.84	31.685	4.78	24.57	100	8.32	32.44	25.24	275	0.34
73	8.54	32.180	4.27	25.00	125	7.90	32.72	25.52	249	0.40
98	8.34	32.423	4.14	25.22						
122	7.96	32.686	3.67	25.49						
125	(7.90)a)	(32.721)a)	-	(25.52)						

123

CNAV OSHAWA; June 30, 1959; 0630 GCT; 50°46.5'N, 127°23.5'W; sounding, 184 fm; wind, 290°, 2 kt; weather, partly cloudy; sea, calm.

0	11.10	30.909	8.69	23.60	0	11.10	30.91	23.60	430	0.00
2	10.64	30.927	8.34	23.69	10	10.37	31.12	23.89	403	0.04
6	10.59	30.983	8.14	23.75	20	9.22	31.48	24.35	358	0.08
10	10.37	31.120	7.67	23.89	30	8.95	31.78	24.63	333	0.12
20	9.22	31.479	5.07	24.35	50	9.24	32.23	24.94	303	0.18
30	8.95	31.776	4.75	24.63	75	9.03	23.33	25.04	294	0.25
50	9.24	32.233	4.70	24.94	100	8.41	32.42	25.21	278	0.33
74	9.05	32.323	4.59	25.04	125	7.83	32.83	25.62	240	0.39
99	8.43	32.412	4.05	25.20	150	7.70	32.90	25.69	233	0.45
124	7.84	32.821	3.52	25.61	175	7.51	33.01	25.81	222	0.51
149	7.71	32.897	3.33	25.69	200	7.46	33.11	25.89	215	0.56
173	7.52	33.005	3.17	25.80	250	7.40	33.15	25.93	212	0.67
198	7.46	33.101	3.07	25.88	300	7.29	33.25	26.02	204	0.78
248	7.40	33.143	3.02	25.92						
296	7.30	33.237	3.12	26.01						
300	(7.29)a)	(33.247)a)	-	(26.02)						

124

CNAV OSHAWA; June 30, 1959; 0755 GCT; 50°41.5'N, 127°13.5'W; sounding, 58 fm; wind, 290°, 2 kt; weather, partly cloudy; sea, calm.

0	10.90	30.697	7.66	23.47	0	10.90	30.70	23.47	442	0.00
2	10.68	30.765	7.57	23.56	10	9.48	31.29	24.17	376	0.04
6	9.76	31.228	5.86	24.07	20	9.00	31.42	24.34	360	0.08
10	9.48	31.289	5.47	24.17	30	8.76	31.64	24.55	340	0.11
20	9.00	31.415	4.98	24.34	50	8.58	32.02	24.87	309	0.18
30	8.76	31.645	4.61	24.55	75	8.50	32.24	25.06	292	0.25
50	8.58	32.021	4.34	24.87						
75	8.50	32.241	4.15	25.06						

125

CNAV OSHAWA; June 30, 1959; 1155 GCT; 50°28'N, 126°10.5'W; sounding, 172 fm; wind, calm; weather, missing; sea, calm.

0	10.40	29.792	6.23	22.85	0	10.40	29.79	22.85	502	0.00
2	10.26	29.782	6.23	22.87	10	10.16	30.14	23.16	472	0.05
6	10.20	29.912	5.92	22.98	20	10.06	30.38	23.36	453	0.10
10	10.16	30.139	5.87	23.16	30	9.80	30.51	23.51	440	0.14
20	10.06	30.377	5.86	23.36	50	9.34	30.66	23.70	422	0.23
30	9.80	30.508	5.61	23.51	75	8.99	31.18	24.15	379	0.33
49	9.36	30.648	5.03	23.68	100	8.94	31.27	24.23	371	0.42
74	9.00	31.163	4.95	24.14	125	8.93	31.30	24.26	370	0.51
99	8.94	31.266	4.89	24.23	150	8.89	31.39	24.33	363	0.61
124	8.93	31.293	4.87	24.25	175	8.86	31.41	24.36	360	0.70
149	8.89	31.383	5.02	24.33	200	8.84	31.46	24.40	357	0.79
173	8.86	31.411	4.88	24.36						
198	8.84	31.459	5.03	24.40						
248	(8.83)a)	31.508	4.95	(24.44)						

a) Value extrapolated by three-point parabolic method.

POG

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
126 CNAV OSHAWA; June 30, 1959; 1237 GCT; 50°29'N, 126°09.5'W; sounding, 173 fm; wind, calm; weather, cloudy; sea, calm.										
0	10.10	30.497	5.76	23.45	0	10.10	30.50	23.45	444	0.00
2	9.95	30.462	5.69	23.45	10	9.84	30.47	23.47	443	0.04
6	9.86	30.459	5.62	23.46	20	9.78	30.45	23.47	443	0.09
10	9.84	30.467	5.61	23.47	30	9.64	30.52	23.54	436	0.13
20	9.78	30.454	5.44	23.47	50	9.37	30.65	23.69	423	0.22
30	9.64	30.522	5.25	23.54	75	9.29	30.80	23.82	410	0.32
50	9.37	30.652	5.07	23.69	100	9.01	31.14	24.12	382	0.42
74	9.30	30.795	5.04	23.81	125	8.95	31.25	24.22	373	0.52
99	9.02	31.134	5.03	24.12	150	8.90	31.33	24.29	366	0.61
124	8.95	31.248	5.03	24.22	175	8.88	31.41	24.35	361	0.70
149	8.90	31.331	5.10	24.29	200	8.88	31.45	24.38	358	0.79
174	8.88	31.410	4.85	24.35	250	8.88	31.48	24.41	357	0.97
198	8.88	31.448	4.83	24.38						
248	8.88	31.480	4.80	24.41						
250	(8.88)a)	(31.480)a)	–	(24.41)						
127 CNAV OSHAWA; June 30, 1959; 1700 GCT; 50°00'N, 125°13'W; sounding, 16 fm; wind, calm; weather, cloudy; sea, calm.										
0	14.20	25.639	5.79	18.97	0	14.20	25.64	18.97	874	0.00
2	13.20	26.513	5.53	19.83	10	11.32	27.88	21.22	658	0.08
6	12.09	27.380	5.17	20.70	20	10.74	28.23	21.59	623	0.14
10	11.32	27.879	5.00	21.22						
25	11.17	27.928	4.95	21.28						
128 CNAV OSHAWA; June 30, 1959; 1715 GCT; 50°00'N, 125°12'W; sounding, 32 fm; wind, calm; weather, cloudy; sea, calm.										
0	13.80	25.617	5.63	19.03	0	13.80	25.62	19.03	868	0.00
2	12.98	26.529	5.63	19.88	10	12.56	27.06	20.37	740	0.08
6	12.83	26.920	5.45	20.21	20	11.10	28.16	21.47	634	0.15
10	12.56	27.061	5.43	20.37	30	10.58	28.57	21.88	595	0.21
20	11.10	28.164	4.96	21.47	50	9.82	29.12	22.42	544	0.32
30	10.58	28.572	4.84	21.88						
50	9.82	29.116	4.54	22.42						
129 CNAV OSHAWA; June 30, 1959; 1810 GCT; 50°04'N, 125°07'W; sounding, 144 fm; wind, calm; weather, cloudy; sea, calm.										
0	18.20	22.960	6.78	16.08	0	18.20	22.96	16.08	1153	0.00
2	17.26	23.729	6.93	16.87	10	13.34	26.49	19.79	796	0.10
6	14.48	25.823	7.58	19.05	20	9.99	28.62	22.01	582	0.17
10	13.34	26.490	6.34	19.79	30	9.24	29.31	22.66	521	0.22
20	9.99	28.620	4.47	22.01	50	8.88	29.71	23.03	485	0.32
30	9.24	29.305	4.12	22.66	75	8.65	29.96	23.26	464	0.44
50	8.88	29.712	3.90	23.03	100	8.46	30.15	23.43	447	0.56
75	8.65	29.964	3.86	23.26	125	9.98	25.97	19.95	781	0.71
100	8.46	30.153	3.90	23.43	150	8.90	29.05	22.51	536	0.88
124	9.97	25.994	7.29	19.97	175	8.70	29.64	23.00	490	1.00
149	8.92	28.981	4.32	22.45	200	8.60	29.94	23.24	467	1.12
174	8.71	29.621	4.03	22.98						
199	8.60	29.926	3.80	23.24						
229	8.46	30.103	4.05	23.39						

a) Value extrapolated by three-point parabolic method.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

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CNAV OSHAWA; June 30, 1959; 1955 GCT; 49°50'N, 124°52'W; sounding, 172 fm; wind, 140°, 1 kt; weather, partly cloudy; sea, calm.

0	18.70	20.591	6.42	14.17	0	18.70	20.59	14.17	1339	0.00
2	17.61	20.714	6.44	14.51	10	12.23	27.20	20.54	723	0.10
10	12.23	27.204	5.43	20.54	20	9.57	29.90	23.07	481	0.16
25	9.93	28.983	4.42	22.30	30	9.48	29.34	22.65	521	0.21
50	9.23	29.600	4.10	22.89	50	9.23	29.60	22.89	499	0.32
75	8.66	29.908	3.95	23.21	75	8.66	29.91	23.21	468	0.44
100	8.40	30.164	3.82	23.45	100	8.40	30.16	23.45	446	0.55
150	8.40	30.407	3.95	23.64	125	8.31	30.33	23.59	432	0.66
200	8.49	30.490	4.01	23.69	150	8.40	30.41	23.64	428	0.77
250	8.56	30.585	3.76	23.76	175	8.43	30.47	23.68	424	0.88
270	8.57	30.637	3.84	23.80	200	8.49	30.49	23.69	424	0.98
					250	8.56	30.58	23.76	419	1.20

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CNAV OSHAWA; June 30, 1959; 2050 GCT; 49°43'N, 124°49.5'W; sounding, 32 fm; wind, 140°, 1 kt; weather, cloudy; sea, calm.

0	19.30	20.577	6.30	14.02	0	19.30	20.58	14.02	1353	0.00
2	17.74	21.401	6.49	15.00	10	11.28	27.91	21.25	655	0.10
10	11.28	27.909	5.47	21.25	20	9.08	30.04	23.25	464	0.16
25	10.43	28.603	4.74	21.93	30	10.11	28.79	22.12	572	0.21
50	8.66	29.341	4.31	22.77	50	8.66	29.34	22.77	510	0.32

132

CNAV OSHAWA; June 30, 1959; 2140 GCT; 49°44'N, 124°40'W; sounding, 188 fm; wind, 140°, 5 kt; weather, cloudy; sea, calm.

0	(20.13)a)	21.475	6.21	(14.50)	0	20.13	21.47	14.50	1306	0.00
2	18.58	21.766	6.47	15.09	10	13.70	27.01	20.12	764	0.10
10	13.70	27.014	7.05	20.12	20	10.57	29.32	22.46	539	0.17
25	10.25	28.703	4.62	22.03	30	9.59	29.07	22.42	543	0.22
50	9.40	29.568	4.29	22.84	50	9.40	29.57	22.84	504	0.33
75	8.66	29.895	4.23	23.20	75	8.66	29.89	23.20	469	0.45
100	8.40	30.112	4.37	23.41	100	8.40	30.11	23.41	450	0.56
150	8.50	30.421	4.39	23.64	125	8.35	30.29	23.55	436	0.68
200	8.52	30.510	4.01	23.70	150	8.50	30.42	23.64	429	0.78
250	8.59	30.554	4.08	23.73	175	8.52	30.49	23.69	424	0.89
					200	8.52	30.51	23.70	423	1.00
					250	8.59	30.55	23.73	421	1.21

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CNAV OSHAWA; June 30, 1959; 2231 GCT; 49°37'N, 124°39'W; sounding, 66 fm; wind, 140°, 1 kt; weather, partly cloudy; sea, calm.

0	20.50	22.856	6.08	15.45	0	20.50	22.86	15.45	1214	0.00
2	19.41	22.988	6.32	15.82	10	12.96	26.60	19.94	780	0.10
10	12.96	26.604	6.53	19.94	20	9.70	28.79	22.18	566	0.17
25	10.08	28.905	4.58	22.22	30	9.53	29.35	22.65	522	0.22
50	9.35	29.503	4.32	22.79	50	9.35	29.50	22.79	508	0.32
75	8.59	29.945	4.18	23.25	75	8.59	29.94	23.25	464	0.45
100	8.36	30.194	4.28	23.48	100	8.36	30.19	23.48	443	0.56
129	8.49	30.408	3.92	23.63	125	8.45	30.38	23.62	430	0.67

134

CNAV OSHAWA; July 1, 1959; 0054 GCT; 49°24.5'N, 124°01'W; sounding, 220 fm; wind, 180°, 3 kt; weather, partly cloudy; sea, calm.

0	20.50	19.200	5.87	12.69	0	20.50	19.20	12.69	1482	0.00
2	18.28	19.645	6.36	13.55	10	13.04	26.42	19.79	795	0.11
10	13.04	26.421	6.92	19.79	20	10.13	28.72	22.06	577	0.18
20	10.13	28.719	4.85	22.06	30	8.45	30.03	23.34	456	0.23
50	8.78	29.670	4.46	23.01	50	8.78	29.67	23.01	487	0.33
99	8.58	30.097	4.57	23.37	75	8.37	30.06	23.38	452	0.45
149	8.40	30.358	4.36	23.60	100	8.58	30.10	23.38	453	0.56
199	8.68	30.611	4.19	23.76	125	8.48	30.25	23.51	440	0.67
298	8.91	30.851	3.52	23.91	150	8.40	30.36	23.61	432	0.78
348	9.00	30.922	3.08	23.95	175	8.49	30.49	23.69	424	0.89
					200	8.68	30.62	23.76	418	1.00
					250	8.85	30.78	23.86	408	1.20
					300	8.91	30.85	23.91	404	1.41

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a) Value extrapolated by three-point parabolic method.

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OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
135	CNAV OSHAWA; July 1, 1959; 0225 GCT; 49°14'N, 123°47.5'W; sounding, 108 fm; wind, calm; weather, partly cloudy; sea, calm.									
0	19.50	19.769	6.55	13.36	0	19.50	19.77	13.36	1417	0.00
2	16.86	22.279	6.98	15.86	10	12.12	27.37	20.69	709	0.11
10	12.12	27.370	6.04	20.69	20	9.89	29.44	22.66	520	0.17
25	10.32	28.695	4.71	22.01	30	9.93	29.00	22.31	554	0.22
50	9.39	29.518	4.28	22.80	50	9.39	29.52	22.80	507	0.33
75	8.64	29.818	4.26	23.15	75	8.64	29.82	23.15	474	0.45
100	8.34	30.050	4.06	23.37	100	8.34	30.05	23.37	453	0.57
125	8.68	30.334	4.02	23.54	125	8.68	30.33	23.54	437	0.68
175	8.66	30.632	4.10	23.78	150	8.79	30.53	23.68	425	0.79
					175	8.66	30.63	23.78	416	0.89
136	CNAV OSHAWA; July 1, 1959; 0319 GCT; 49°17.5'N, 123°40'W; sounding, 134 fm; wind, calm; weather, partly cloudy; sea, calm.									
0	20.30	12.899	7.12	7.98	0	20.30	12.90	7.98	1944	0.00
2	17.00	20.646	7.22	14.59	10	12.45	26.51	19.97	778	0.14
10	12.45	26.513	6.46	19.97	20	9.92	29.42	22.64	522	0.20
25	9.98	29.024	4.63	22.32	30	9.50	29.49	22.76	510	0.25
50	9.31	29.520	4.35	22.81	50	9.31	29.52	22.81	506	0.35
75	8.56	29.935	4.39	23.25	75	8.56	29.94	23.25	465	0.48
100	8.50	30.126	4.41	23.41	100	8.50	30.13	23.41	450	0.59
125	8.78	30.379	4.54	23.56	125	8.78	30.38	23.56	435	0.70
150	8.88	30.522	4.51	23.66	150	8.88	30.52	23.66	426	0.81
174	8.68	30.571	4.35	23.73	175	8.68	30.57	23.73	420	0.92
199	8.72	30.646	4.06	23.78	200	8.72	30.65	23.78	416	1.02
224	8.88	30.763	3.97	23.85						
137	CNAV OSHAWA; July 1, 1959; 0405 GCT; 49°22'N, 123°33.5'W; sounding, 94 fm; wind, calm; weather, partly cloudy; sea, calm.									
0	20.30	13.766	6.55	8.64	0	20.30	13.77	8.64	1880	0.00
2	19.20	14.559	6.64	9.49	10	12.70	29.08	21.90	593	0.12
10	12.70	29.079	6.44	21.90	20	9.88	29.57	22.76	510	0.18
20	9.88	29.570	4.54	22.76	30	8.66	29.78	23.11	477	0.23
40	9.04	29.705	4.50	23.00	50	8.90	29.82	23.11	478	0.32
60	8.95	29.960	4.53	23.21	75	8.93	30.10	23.32	458	0.44
80	8.94	30.138	4.46	23.35	100	8.81	30.32	23.51	440	0.55
120	8.56	30.505	4.52	23.69						
138	CNAV OSHAWA; July 1, 1959; 0525 GCT; 49°07'N, 123°30.5'W; sounding, 188 fm; wind, calm; weather, partly cloudy; sea, calm.									
0	16.30	0.960	7.45	0.31	0	16.30	0.96	0.31	2766	0.00
2	15.50	4.724	7.90	2.72	10	11.70	27.67	20.99	680	0.17
10	11.70	27.665	5.67	20.99	20	10.98	28.33	21.62	620	0.24
20	10.98	28.329	5.07	21.62	30	10.36	28.88	22.15	569	0.30
50	9.44	29.668	4.43	22.91	50	9.44	29.67	22.91	497	0.40
100	9.56	30.154	4.68	23.27	75	9.08	30.18	23.37	454	0.52
149	8.86	30.505	3.81	23.65	100	9.56	30.15	23.27	463	0.64
199	8.80	30.711	3.97	23.82	125	9.30	30.35	23.46	445	0.75
269	8.78	30.836	3.68	23.92	150	8.85	30.51	23.65	427	0.86
					175	8.75	30.63	23.76	417	0.97
					200	8.80	30.71	23.82	412	1.07
					250	8.78	30.82	23.91	404	1.28
139	CNAV OSHAWA; July 1, 1959; 0718 GCT; 48°57'N, 123°05'W; sounding, 70 fm; wind, calm; weather, clear; sea, calm.									
0	16.20	19.599	8.89	13.95	0	16.20	19.60	13.95	1360	0.00
2	16.56	20.247	8.79	14.37	10	11.41	27.53	20.93	686	0.10
10	11.41	27.531	5.63	20.93	20	9.32	30.58	23.64	427	0.16
25	10.09	29.575	5.01	22.73	30	9.85	29.95	23.06	482	0.20
50	9.89	29.870	4.80	23.00	50	9.89	29.87	23.00	488	0.30
75	9.81	30.061	4.74	23.16	75	9.81	30.06	23.16	474	0.42
100	9.62	30.188	4.68	23.29	100	9.62	30.19	23.29	462	0.54

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
CNAV OSHAWA; July 1, 1959; 0902 GCT; 48°46.5'N, 123°03'W; sounding, 112 fm; wind, 140°, 2 kt; weather, clear; sea, calm.										140
0	13.60	25.040	6.36	18.62	0	13.60	25.04	18.62	908	0.00
2	12.86	25.878	6.31	19.40	10	11.31	27.88	21.22	658	0.08
9	11.47	27.668	5.72	21.03	20	10.23	29.46	22.62	524	0.14
23	10.09	29.730	4.75	22.86	30	9.76	30.24	23.31	458	0.19
46	9.88	30.125	4.72	23.20	50	9.85	30.18	23.24	465	0.28
68	9.71	30.360	4.60	23.41	75	9.56	30.59	23.61	430	0.39
91	9.06	31.420	3.92	24.33	100	8.89	31.69	24.57	339	0.49
137	8.68	31.966	3.57	24.82	125	8.66	32.03	24.87	311	0.57
160	8.62	32.067	3.47	24.90	150	8.64	32.04	24.88	310	0.65
CNAV OSHAWA; July 1, 1959; 0951 GCT; 48°44'N, 122°58.5'W; sounding, 65 fm; wind, 140°, 5 kt; weather, clear; sea, calm.										141
0	14.00	23.104	7.83	17.06	0	14.00	23.10	17.06	1058	0.00
2	13.09	25.566	7.03	19.12	10	10.97	28.43	21.70	612	0.08
10	10.97	28.432	5.44	21.70	20	10.11	29.66	22.80	507	0.14
25	10.42	29.290	5.13	22.46	30	10.28	29.51	22.65	521	0.19
49	9.98	30.062	4.70	23.13	50	9.96	30.09	23.16	473	0.29
74	9.59	30.679	4.36	23.67	75	9.58	30.70	23.69	423	0.40
99	9.42	30.962	4.33	23.92	100	9.42	30.97	23.92	401	0.51
100	(9.42)a)	(30.966)a)	-	(23.92)						
CNAV OSHAWA; July 1, 1959; 1045 GCT; 48°41'N, 122°47'W; sounding, 60 fm; wind, 220°, 5 kt; weather, clear; sea, calm.										142
0	12.60	26.921	6.38	20.25	0	12.60	26.92	20.25	751	0.00
2	11.45	27.833	5.87	21.16	10	10.54	28.90	22.14	570	0.07
10	10.54	28.903	5.18	22.14	20	10.20	29.38	22.56	530	0.12
25	10.37	29.251	4.93	22.44	30	10.31	29.36	22.54	532	0.18
50	10.03	29.799	4.76	22.92	50	10.03	29.80	22.92	496	0.28
75	9.85	30.104	4.61	23.18	75	9.85	30.10	23.18	471	0.40
CNAV OSHAWA; July 1, 1959; 1122 GCT; 48°42.5'N, 122°43.5'W; sounding, 33 fm; wind, 220°, 5 kt; weather, partly cloudy; sea, calm.										143
0	12.30	27.438	6.98	20.71	0	12.30	27.44	20.71	707	0.00
2	12.11	27.510	6.97	20.80	10	10.80	28.97	22.15	569	0.06
6	11.70	27.822	6.49	21.11	20	10.22	29.65	22.77	510	0.12
10	10.80	28.973	5.57	22.15	30	10.01	29.87	22.98	490	0.17
19	10.26	29.598	5.07	22.73	50	10.12	29.76	22.87	500	0.27
39	10.14	29.700	4.98	22.82						
58	10.13	29.808	4.87	22.91						
CNAV OSHAWA; July 1, 1959; 1531 GCT; 48°46.5'N, 123°03'W; sounding, 102 fm; wind, 220°, 5 kt; weather, cloudy; sea, calm.										144
0	11.30	28.163	5.35	21.44	0	11.30	28.16	21.44	637	0.00
2	11.18	28.186	5.15	21.48	10	10.05	29.72	22.85	501	0.06
6	10.44	29.308	4.91	22.47	20	9.92	29.93	23.04	484	0.11
10	10.05	29.721	4.75	22.85	30	9.70	30.32	23.38	452	0.15
20	9.92	29.930	4.65	23.04	50	9.26	30.99	23.97	396	0.24
39	9.42	30.829	4.13	23.82	75	9.24	31.01	23.98	395	0.34
59	(9.20)b)	30.927	4.10	(23.93)	100	9.25	31.10	24.05	388	0.44
79	9.28	31.029	4.06	23.99	125	9.14	31.27	24.20	374	0.53
98	9.26	31.090	4.05	24.04						
148	8.96	31.513	3.91	24.42						

a) Value extrapolated by three-point parabolic method.
b) Value interpolated by three-point parabolic method.

POG

CS-59-2

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

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CNAV OSHAWA; July 1, 1959; 1648 GCT; 48°43.5'N, 122°58'W; sounding, 96 fm; wind, 220°, 5 kt; weather, cloudy; sea, calm.

0	13.70	24.927	6.98	18.52	0	13.70	24.93	18.52	918	0.00
2	13.31	24.950	7.01	18.61	10	10.44	29.00	22.24	561	0.07
6	11.18	28.257	5.52	21.53	20	10.05	29.49	22.68	519	0.13
10	10.44	29.005	5.09	22.24	30	10.47	29.19	22.37	548	0.18
24	10.48	29.131	4.93	22.33	50	10.38	29.37	22.53	533	0.29
39	10.44	29.286	4.92	22.45	75	9.95	29.96	23.05	484	0.42
59	10.30	29.411	4.79	22.57	100	9.65	30.48	23.51	441	0.53
78	9.86	30.102	4.59	23.18	125	9.46	30.75	23.74	418	0.64
97	9.68	30.434	4.43	23.47						
122	9.48	30.722	4.24	23.72						
125	(9.46)a)	(30.745)a)	-	(23.74)						

a) Value extrapolated by three-point parabolic method.

CRUISE CS-59-2, SURFACE OBSERVATIONS

Date	Time GCT	Latitude North	Longitude West	T °C	S ‰	O_2 ml/L
VI-13	2000	46°13.0'	128°27.0'	13.6	32.488	5.86
14	0107	46°40.0'	128°40.0'	13.8	-	-
14	0737	47°23.0'	127°37.0'	13.4	32.419	6.22
17	2300	48°44.0'	125°33.0'	15.7	28.841	6.58
18	0000	48°43.6'	125°32.6'	16.3	30.238	7.07
18	0120	48°49.5'	125°56.5'	17.2	30.853	7.04
18	0230	48°56.0'	126°01.5'	14.2	32.125	6.34
18	0615	49°18.5'	127°06.5'	15.2	30.638	-
18	0745	49°34.0'	127°24.5'	14.0	32.067	6.41
18	0900	49°50.0'	127°40.5'	13.7	31.447	6.31
18	1351	49°54.0'	128°15.0'	12.6	31.978	6.64
18	1910	49°24.0'	128°57.0'	12.8	32.551	6.49
19	0142	48°43.0'	129°55.0'	12.9	32.625	6.38
19	0745	48°04.0'	130°50.0'	12.8	32.622	6.45
19	1415	47°20.0'	131°50.0'	12.7	32.648	6.39
19	2235	47°10.0'	133°40.0'	13.0	32.725	6.40
20	0825	48°07.0'	135°35.0'	11.6	32.652	6.47
20	1555	49°19.0'	136°35.0'	10.8	32.620	6.60
20	2220	50°05.0'	136°18.5'	10.9	32.732	6.59
21	0330	50°36.0'	134°57.0'	11.2	32.468	6.54
21	0900	51°02.0'	133°40.0'	11.4	32.461	6.57
21	1457	51°27.0'	132°25.0'	12.3	32.257	6.76
28	0013	55°00.0'	134°30.0'	12.3	31.795	6.64
28	0605	55°00.0'	135°30.0'	12.2	32.159	6.79
28	1105	54°40.0'	136°00.0'	11.6	32.159	6.78
28	1240	54°20.0'	136°00.0'	11.6	31.399	6.94
28	1635	54°00.0'	135°28.0'	11.2	32.320	6.78
28	1940	54°00.0'	134°30.0'	12.3	32.300	6.78

Sta.	Date	Time GCT	Weather	Wind	Sea	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
5-2[a)]	VI-9	0517	missing	missing	calm	0	13.10	28.899	9.81	21.68
						10	-	29.269	5.82	-
						50	-	30.177	4.86	-
						100	-	30.682	3.91	-
						150	-	31.187	0.05	-
						201	-	31.236	<0.05	-
5-3	VI-9	0729	missing	missing	calm	0	12.80	28.930	9.27	21.76
						10	9.94	29.192	6.18	22.46
						50	9.17	30.143	4.81	23.32
						100	8.73	30.677	2.53	23.80
						150	9.12	31.200	<0.05	24.16
						200	9.10	31.240	<0.05	24.20
5-4	VI-9	0916	moderate rain	missing	calm	0	12.70	28.848	9.22	21.71
						10	9.76	29.261	5.77	22.54
						50	9.30	30.065	4.96	23.24
						100	8.72	30.691	2.62	23.82
						150	9.10	31.211	<0.05	24.17
						200	9.10	31.236	<0.05	24.18
5-5	VI-9	1120	moderate rain	missing	calm	0	12.80	28.809	9.13	21.66
						10	9.86	29.218	6.03	22.50
						50	9.18	30.053	4.67	23.25
						100	8.89	30.696	3.67	23.80
						150	9.11	31.201	<0.05	24.16
						200	9.11	31.249	<0.05	24.20
5-6	VI-9	1315	moderate rain	missing	calm	0	12.70	28.779	8.88	21.66
						10	9.88	29.237	5.97	22.51
						50	9.19	30.125	4.85	23.32
						100	8.86	30.672	3.49	23.78
						150	9.11	31.201	-	24.16
						200	9.09	31.236	-	24.19
5-7	VI-9	1519	moderate rain	180°, 2 kt	calm	0	12.80	28.784	8.99	21.63
						10	9.64	29.289	5.54	22.59
						50	9.28	30.124	4.75	23.28
						100	8.84	30.711	3.17	23.82
						150	9.11	31.207	0.00	24.16
						200	9.08	31.251	0.00	24.20
5-8	VI-9	1929	intermittent slight drizzle	130°, 3 kt	calm	0	12.8	28.851	9.13	21.70
						10	9.66	29.270	5.63	22.56
						50	9.32	30.073	4.96	23.24
						100	8.86	30.715	3.26	23.83
						150	9.10	31.196	<0.05	24.15
						200	9.08	31.236	<0.05	24.19

a) See page 725 for Station 5-1.

Sta.	Date	Time GCT	Weather	Wind	Sea	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
5-9	VI-9	2126	missing	270°, 3 kt	calm	0	13.00	28.671	8.73	21.52
						10	9.60	29.287	4.96	22.60
						50	9.17	30.146	4.76	23.33
						100	8.78	30.696	2.05	23.81
						150	9.09	31.203	<0.05	24.16
						190	9.08	31.236	<0.05	24.19
5-10	VI-9	2323	missing	270°, 3 kt	calm	0	12.60	28.921	9.14	21.78
						10	9.63	29.301	5.67	22.60
						50	9.24	30.163	4.68	23.33
						100	8.89	30.720	2.95	23.82
						150	9.11	31.197	<0.05	24.16
						190	9.10	31.239	<0.05	24.19
5-11	VI-10	0110	missing	270°, 3 kt	calm	0	12.50	28.969	9.18	21.83
						10	9.74	29.304	5.67	22.58
						50	9.34	30.147	4.73	23.30
						100	8.74	30.250	2.57	23.47
						150	9.11	31.202	-	24.16
						180	9.08	31.268	-	24.22
5-12	VI-10	0312	missing	270°, 3 kt	smooth	0	12.80	28.917	8.79	21.74
						10	9.75	29.272	6.06	22.56
						50	9.34	30.159	4.78	23.31
						100	8.78	30.707	2.61	23.83
						150	9.10	31.210	0.02	24.16
						180	9.07	31.234	0.00	24.19
5-13	VI-10	0516	missing	270°, 3 kt	smooth	0	13.00	28.979	8.80	21.75
						10	9.72	29.288	5.63	22.58
						50	9.31	30.156	4.73	23.31
						100	8.91	30.699	3.74	23.80
						150	9.12	31.191	0.09	24.14
						200	9.08	31.240	0.00	24.19
5-14	VI-10	0719	missing	270°, 3 kt	smooth	0	12.80	28.784	8.75	21.65
						10	9.75	29.278	5.87	22.56
						50	9.27	30.223	4.75	23.38
						100	8.84	30.716	3.38	23.82
						150	9.10	31.210	<0.05	24.16
						190	9.09	31.239	<0.05	24.19
5-15	VI-10	0853	missing	210°, 3 kt	calm	0	12.40	28.808	8.49	21.74
						10	9.65	29.286	5.79	22.59
						50	9.31	30.167	4.75	23.33
						100	8.87	30.741	3.51	23.84
						150	9.11	31.211	<0.05	24.16
						190	9.08	31.238	<0.05	24.19

CRUISE CS-59-2, TIME SERIES STATIONS, SAANICH INLET

Sta.	Date	Time GCT	Latitude North	Longitude West	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
5A	VI-9	2038	48°38.2'	123°30.8'	0		28.878		
					10		29.235		
					50		30.068		
5B	VI-9	2103	48°38.3'	123°29.2'	0		28.817		
					10		29.152		
					50		29.986		
5C	VI-9	2125	48°37.3'	123°29.2'	0		28.822		
					10		29.097		
					50		30.030		
					95		30.678		
5D	VI-9	2145	48°37.3'	123°30.8'	0		28.774		
					10		29.179		
					50		30.103		
					100		30.783		
5A	VI-10	0026	48°38.2'	123°30.8'	0		28.895		
					10		29.184		
					50		30.048		
					100		30.712		
5D	VI-10	0050	48°37.3'	123°30.8'	0		29.059		
					10		29.284		
					50		30.009		
					100		30.703		
5C	VI-10	0113	48°37.3'	123°29.2'	0		28.803		
					10		29.183		
					50		30.063		
					79		30.298		
5B	VI-10	0137	48°38.3'	123°29.2'	0		28.834		
					10		29.290		
					50		30.077		
					100		30.713		

CRUISE CS-59-2, TIME SERIES STATIONS, AMPHITRITE POINT (BARKLEY SOUND)

Sta.	Date	Time GCT	Weather	Wind	Sea	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
34-2[a)]	VI-14	2333	missing	270°, 4 kt	smooth	0	13.90	29.993	8.56	22.38
						2	13.04	29.961	8.85	22.52
						6	12.16	30.523	8.01	23.10
						10	11.90	30.691	7.07	23.30
						20	11.03	31.277	6.08	23.92
						30	10.42	31.527	5.76	24.22
						50	-	31.829	4.99	-
						75	8.64	32.289	3.74	25.08
						94	8.10	32.709	2.97	25.50
34-3	VI-15	0125	partly cloudy	270°, 4 kt	smooth	0	13.90	30.218	8.80	22.56
						2	12.82	30.208	8.90	22.76
						6	12.13	30.502	8.12	23.10
						10	11.61	30.934	6.78	23.53
						20	11.08	31.263	6.10	23.90
						30	10.33	31.589	5.65	24.27
						50	-	32.083	4.29	-
						75	8.61	32.364	3.66	25.14
						94	8.09	32.868	2.63	25.62
34-4	VI-15	0330	partly cloudy	270°, 3 kt	smooth	0	13.20	30.330	8.86	22.77
						2	13.08	30.234	8.73	22.72
						6	12.72	30.707	8.15	23.16
						10	11.90	30.982	6.94	23.52
						20	11.02	31.370	6.07	23.99
						30	10.20	31.606	5.34	24.31
						50	9.10	32.067	4.27	24.83
						75	8.56	32.374	3.53	25.16
						90	8.07	32.860	2.56	25.62
34-5	VI-15	0510	partly cloudy	270°, 2 kt	smooth	0	12.80	30.124	8.38	22.69
						2	12.99	30.079	8.69	22.62
						6	12.24	30.835	7.56	23.34
						10	11.92	30.999	7.12	23.53
						20	10.72	31.382	5.98	24.04
						30	10.04	31.686	5.28	24.40
						50	9.02	32.119	4.16	24.90
						75	8.45	32.488	3.31	25.28
						89	8.07	32.860	2.61	25.62
34-6	VI-15	0720	partly cloudy	280°, 2 kt	smooth	0	12.60	30.529	7.70	23.05
						2	12.47	30.540	7.85	23.07
						6	11.75	30.982	6.95	23.56
						10	11.39	31.122	6.29	23.73
						20	10.71	31.377	6.04	24.05
						30	9.94	31.664	5.22	24.40
						50	8.91	32.190	4.05	24.97
						75	8.43	32.490	3.32	25.28
						90	7.97	32.974	2.35	25.72
34-7	VI-15	0930	partly cloudy	280°, 2 kt	smooth	0	12.70	30.415	7.90	22.94
						2	12.36	30.443	7.80	23.02
						6	11.91	30.758	7.51	23.35
						10	11.47	31.149	6.43	23.73
						20	10.57	31.334	5.94	24.04
						30	-	31.612	5.26	-
						50	8.95	32.106	-	24.90
						75	8.53	32.411	-	25.19
						90	8.02	32.891	2.56	25.64
34-8	VI-15	1115	partly cloudy	280°, 1 kt	smooth	0	12.20	30.287	8.05	22.92
						2	12.29	30.368	7.64	22.96
						6	11.59	30.916	6.64	23.54
						10	11.43	30.992	6.50	23.62
						20	10.71	31.325	6.08	24.01
						30	10.17	31.526	5.56	24.26
						50	9.15	32.011	4.34	24.79
						75	8.44	32.487	3.25	25.27

Sta.	Date	Time GCT	Weather	Wind	Sea	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
34-9	VI-15	1313	cloudy	direction missing, force, 1 kt	calm	0	12.50	30.118	7.60	22.74
						2	12.48	30.110	7.60	22.74
						6	11.78	30.710	6.87	23.34
						10	11.83	31.051	7.06	23.59
						20	10.88	31.337	6.10	23.97
						30	10.10	31.512	5.37	24.25
						50	8.98	32.102	4.18	24.87
						75	8.45	32.473	3.32	25.24
						90	8.02	32.917	2.50	25.66
34-10	VI-15	1530	partly cloudy	direction missing, force, 1 kt	calm	0	13.50	29.923	8.40	22.39
						2	12.71	29.776	8.60	22.44
						6	11.88	30.669	7.22	23.28
						10	11.66	30.804	7.04	23.41
						20	11.12	31.319	6.19	23.92
						30	10.30	31.589	5.47	24.27
						50	-	31.966	4.52	-
						75	8.55	32.404	3.53	25.17
						90	-	32.874	2.52	-
34-11	VI-15	1725	partly cloudy	280°, 1 kt	calm	0	14.20	29.509	7.97	21.94
						2	13.26	29.492	8.35	22.12
						6	11.96	30.463	7.57	23.09
						10	11.84	31.057	6.98	23.58
						20	11.77	31.476	6.44	23.95
						30	10.32	31.568	5.42	24.25
						50	9.28	31.998	4.44	24.75
						75	8.62	32.329	3.59	25.10
						90	7.98	32.952	2.29	24.70
34-12	VI-15	1945	partly cloudy	280°, 5 kt	smooth	0	14.10	29.589	8.39	22.02
						2	13.77	29.558	8.44	22.07
						6	13.57	29.565	8.55	22.11
						10	12.08	30.873	6.92	23.40
						20	11.51	31.337	6.17	23.87
						30	10.47	31.535	5.49	24.21
						50	9.28	31.968	4.54	24.72
						75	8.50	32.456	3.43	25.22
						90	8.02	32.908	-	25.66
34-13	VI-15	2120	partly cloudy	280°, 5 kt	smooth	0	13.80	29.913	8.28	22.32
						2	13.46	29.890	8.59	22.36
						6	13.04	30.055	8.59	22.59
						10	12.26	31.106	7.15	23.56
						20	11.56	31.330	6.27	23.84
						30	11.26	31.440	6.42	23.99
						50	9.20	31.994	4.49	24.76
						75	8.59	32.382	3.55	25.16
						90	8.00	32.920	2.56	25.65
34-14	VI-15	2312	partly cloudy	300°, 5 kt	slight	0	13.70	30.091	7.98	22.48
						2	13.38	30.063	8.77	22.52
						6	13.04	30.482	8.10	22.90
						10	12.21	31.128	7.08	23.57
						20	11.62	31.332	6.24	23.83
						30	10.62	31.479	5.72	24.12
						50	9.23	31.976	4.24	24.75
						75	8.60	32.357	3.46	25.14
						89	8.06	32.881	2.57	25.63
34-15	VI-16	0110	missing	300°, 5 kt	moderate	0	13.50	30.300	8.64	22.66
						2	13.22	30.284	8.96	22.70
						6	12.79	30.372	8.48	22.88
						10	11.94	31.111	7.02	23.60
						20	11.43	31.317	6.29	23.86
						30	10.45	31.541	5.67	24.21
						50	9.23	31.981	4.29	24.74
						75	8.60	32.376	3.55	25.16

Sta.	Date	Time GCT	Weather	Wind	Sea	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
74-2[a)]	VI-23	0500	partly cloudy	240°, 1 kt	calm	0	12.70	29.779	7.36	22.44
						10	11.09	30.457	6.73	23.26
						40	9.08	31.487	5.25	24.39
						100	7.27	33.057	3.50	25.88
						150	6.79	33.526	2.54	26.30
						200	6.56	33.635	2.52	26.44
						240	6.52	33.669	2.36	26.46
74-3	VI-23	0717	partly cloudy	240°, 2 kt	calm	0	13.00	29.631	7.16	22.26
						10	11.68	30.432	7.07	23.14
						40	9.13	31.511	5.37	24.39
						100	7.21	33.107	3.42	25.93
						150	6.77	33.548	2.47	26.35
						200	6.57	33.640	2.44	26.44
						240	6.59	33.694	2.37	26.47
74-4	VI-23	0900	partly cloudy	240°, 1 kt	calm	0	13.90	29.720	7.31	22.16
						10	11.42	31.045	6.75	23.67
						40	8.80	31.577	4.97	24.50
						100	7.26	33.060	3.58	25.88
						150	6.79	33.526	2.74	26.32
						200	6.58	33.625	2.48	26.43
						240	6.52	33.696	2.24	26.49
74-5	VI-23	1107	partly cloudy	calm	calm	0	14.60	29.480	7.06	21.84
						10	11.90	30.526	7.22	23.18
						40	8.81	31.539	5.14	24.48
						100	7.38	32.982	3.65	25.82
						150	6.80	33.495	2.66	26.29
						200	6.57	33.629	2.42	26.43
						240	6.51	33.706	2.23	26.50
74-6	VI-23	1300	partly cloudy	calm	calm	0	13.60	29.387	7.12	21.18
						10	11.04	30.417	6.58	23.24
						40	10.22	31.503	6.00	24.21
						99	7.42	32.917	3.68	25.76
						149	6.84	33.476	2.66	26.27
						198	6.60	33.614	2.42	26.41
						238	6.51	33.701	2.23	26.49
74-7	VI-23	1455	partly cloudy	calm	calm	0	13.40	29.684	7.38	22.24
						10	11.52	30.131	7.20	22.94
						40	9.00	31.428	5.23	24.36
						100	7.30	33.023	3.63	25.85
						150	6.78	33.520	2.62	26.32
						200	6.56	33.635	2.43	26.44
						240	6.50	33.707	-	26.50
74-8	VI-23	1655	partly cloudy	calm	calm	0	13.80	29.597	7.26	22.10
						10	10.84	30.517	6.46	23.36
						40	8.60	31.565	4.75	24.53
						100	7.30	33.001	3.54	25.84
						150	6.82	33.505	2.57	26.30
						200	6.58	33.624	2.32	26.42
						240	6.49	33.711	2.30	26.50

a) See page 746 for Station 74-1.

Sta.	Date	Time GCT	Weather	Wind	Sea	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
74-9	VI-23	1910	partly cloudy	calm	calm	0	13.90	29.524	7.21	22.02
						10	11.38	30.944	6.80	23.60
						40	8.75	31.558	4.89	24.50
						100	7.35	32.992	3.63	25.84
						150	6.72	33.553	2.52	26.35
						200	6.58	33.641	2.37	26.44
						240	6.50	33.700	2.28	26.49
74-10	VI-23	2106	partly cloudy	250°, 1 kt	calm	0	14.80	29.481	7.50	21.81
						10	11.72	31.016	6.98	23.60
						40	8.54	31.614	4.76	24.56
						100	7.19	33.143	3.39	25.96
						150	6.75	33.550	2.52	26.34
						200	6.54	33.641	2.42	26.44
						240	6.51	33.680	2.24	26.46
74-11	VI-23	2310	partly cloudy	250°, 3 kt	smooth	0	14.00	29.531	7.30	22.01
						10	11.79	30.973	7.17	23.54
						40	9.22	31.595	5.50	24.46
						100	7.28	33.074	3.64	25.90
						150	-	33.534	2.68	-
						200	6.58	33.638	2.42	26.43
						240	6.52	33.689	2.23	26.48
74-12	VI-24	0100	missing	250°, 3 kt	smooth	0	14.40	29.699	7.60	22.04
						10	-	30.663	7.39	-
						40	9.76	31.504	5.99	24.29
						100	7.34	32.990	3.77	24.82
						150	6.82	33.453	2.77	26.26
						200	6.53	33.656	2.41	26.46
						240	6.50	33.711	2.21	26.50
74-13	VI-24	0300	missing	280°, 3 kt	smooth	0	14.30	29.657	7.55	22.03
						10	12.08	30.615	7.41	23.20
						40	8.56	31.591	4.70	24.56
						100	7.37	32.926	3.78	25.78
						150	6.82	33.499	2.56	26.29
						200	6.55	33.641	2.43	26.44
						240	6.50	33.706	2.17	26.50
74-14	VI-24	0425	missing	missing	missing	0	13.80	29.715	7.66	22.18
						2	13.64	29.695	7.76	22.20
						6	11.50	30.627	7.17	23.32
						10	11.58	30.786	7.30	23.44
						20	-	31.175	6.45	-
						30	10.64	31.391	6.33	24.06
						50	8.30	31.809	4.50	24.76
						75	7.79	32.416	4.81	25.32
						100	7.26	33.044	3.53	25.88
						125	6.88	33.412	2.81	26.22
						150	6.82	33.511	2.59	26.30
						175	6.66	33.577	2.52	26.38
						199	6.58	33.629	2.40	26.43
						238	6.52	33.704	2.28	26.49

CRUISE CS-59-2, TIME SERIES STATIONS, MILBANKE SOUND

Sta.	Date	Time GCT	Latitude North	Longitude West	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L
74A	VI-23	1503	52°17.1'	128°34.9'	0		29.281		
					10		29.787		
					40		31.729		
74B	VI-23	1524	52°16.6'	128°32.1'	0		29.126		
					10		30.411		
					40		31.549		
74C	VI-23	1552	52°14.3'	128°33.9'	0		29.341		
					10		30.428		
					40		31.173		
74D	VI-23	1624	52°15.4'	128°37.8'	0		29.546		
					10		30.146		
					40		31.626		
74C	VI-24	0105	52°14.3'	128°33.9'	0	14.50	29.386		
					10	-	30.522		
					40	-	31.440		
74B	VI-24	0121	52°16.6'	128°32.1'	0	14.30	29.462		
					10	-	30.795		
					40	-	31.470		
74A	VI-24	0140	52°17.1'	128°34.9'	0	13.70	29.674		
					10	-	30.442		
					40	-	31.277		
74D	VI-24	0325	52°15.4'	128°37.8'	0	12.60	29.957		
					10	-	30.375		
					40	-	31.451		

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CNAV OSHAWA; August 4, 1959; 0326 GCT;[a] 49°04'N, 126°38'W; sounding, 74 fm; wind, 270°, 2 kt; weather, partly cloudy; sea, slight.											1
0	12.30	32.585	7.22	24.68	0	12.30	32.58	7.22	24.68	327b)	0.00
10	10.67	32.655	7.10	25.03	10	10.67	32.66	7.10	25.03	294	0.03
20	8.30	32.663	6.42	25.42	20	8.30	32.66	6.42	25.42	257	0.06
30	8.09	32.695	6.42	25.47	30	8.09	32.70	6.42	25.47	252	0.08
50	7.29	32.820	6.28	25.69	50	7.29	32.82	6.28	25.69	231	0.13
75	7.42	33.186	5.01	25.96	75	7.42	33.19	5.01	25.96	205	0.19
100	6.99	33.641	3.88	26.37	100	6.99	33.64	3.88	26.37	166	0.24
125	6.58	33.883	2.44	26.62	125	6.58	33.88	2.44	26.62	143	0.28
CNAV OSHAWA; August 5, 1959; 0715 GCT; 49°15'N, 127°16'W; sounding, 700 fm; wind, 270°, 2 kt; weather, partly cloudy; sea, slight.											2
0	13.30	32.385	6.68	24.33	0	13.30	32.38	6.68	24.33	360	0.00
10	11.76	32.446	7.25	24.67	10	11.76	32.45	7.25	24.67	357	0.04
20	10.52	32.647	7.64	25.05	20	10.52	32.65	7.64	25.05	292	0.07
30	10.28	32.661	6.84	25.10	30	10.28	32.66	6.84	25.10	287	0.10
50	9.77	32.667	6.69	25.19	50	9.77	32.67	6.69	25.19	279	0.15
75	7.44	32.674	6.64	25.55	75	7.44	32.67	6.64	25.55	244	0.22
100	7.42	33.231	4.74	25.99	100	7.42	33.23	4.74	25.99	202	0.27
125	7.56	33.705	3.55	26.34	125	7.56	33.70	3.55	26.34	169	0.32
150	7.24	33.794	3.55	26.46	150	7.24	33.79	3.55	26.46	158	0.36
250	6.32	33.980	2.40	26.73	175	6.96	33.85	3.20	26.54	150	0.40
350	5.52	34.021	1.52	26.86	200	6.72	33.90	2.90	26.61	144	0.44
450	5.18	34.119	0.95	26.98	250	6.32	33.98	2.40	26.73	132	0.51
550	4.81	34.188	1.36	27.08	300	5.89	34.00	1.93	26.80	126	0.58
650	4.46	34.235	1.21	27.15	400	5.34	34.07	1.22	26.92	114	0.70
850	3.89	34.342	0.96	27.30	500	4.99	34.16	1.16	27.03	104	0.82
					600	4.63	34.21	1.28	27.12	95	0.93
					700	4.30	34.26	1.14	27.19	89	1.02
					800	4.02	34.32	1.02	27.26	82	1.12
CNAV OSHAWA; August 5, 1959; 1138 GCT; 49°25'N, 127°55'W; sounding, ±1600 fm; wind, calm; weather, clear; sea, smooth.											3
0	11.60	32.710	7.96	24.91	0	11.60	32.71	7.96	24.91	305	0.00
10	10.94	32.960	8.15	25.22	10	10.94	32.96	8.15	25.22	276	0.03
20	9.64	32.901	6.68	25.40	20	9.64	32.90	6.68	25.40	259	0.06
30	8.85	33.005	5.56	25.60	30	8.85	33.00	5.56	25.60	240	0.08
50	7.29	33.155	5.29	25.95	50	7.29	33.16	5.29	25.95	206	0.13
75	6.82	33.586	4.38	26.35	75	6.82	33.59	4.38	26.35	168	0.17
100	6.80	33.725	3.91	26.46	100	6.80	33.72	3.91	26.46	158	0.22
125	6.86	33.882	3.28	26.58	125	6.86	33.88	3.28	26.58	146	0.25
150	6.66	33.924	3.00	26.64	150	6.66	33.92	3.00	26.64	141	0.29
175	6.46	33.933	2.72	26.67	175	6.46	33.93	2.72	26.67	138	0.33
200	6.15	33.951	2.59	26.73	200	6.15	33.95	2.59	26.73	132	0.36
225	5.91	33.967	2.20	26.77	250	5.82	33.99	1.81	26.80	126	0.43
250	5.82	33.990	1.81	26.80	300	5.41	34.00	1.47	26.86	120	0.49
299	5.42	33.999	1.48	26.86	400	4.96	34.08	0.57	26.97	110	0.61
391	4.98	34.067	0.60	26.96	500	4.77	34.16	0.30	27.06	101	0.72
489	4.79	34.151	0.32	27.05							
500	(4.77)c)	(34.159)c)	(0.30)c)	(27.06)							

a) Although not indicated in the tabulation, two casts were made at each station, the first to a depth of 300 meters and the second to a maximum depth of 2000 (2100) meters. At 20 stations an additional third cast was made to a maximum depth of 4000 (4100) meters. The time reported is the time of the messenger release of the shallow cast. The second and third casts were generally made about 45 and 120 minutes later, respectively.

b) Values of thermosteric anomaly were computed by the Data Collecting and Processing Group of Scripps Institution.

c) Value extrapolated by two-point logarithmic method.

POG

NP-59-2

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
4	CNAV OSHAWA; August 5, 1959; 1749 GCT; 49°39'N, 128°40'W; sounding, missing; wind, 220°, 7 kt; weather, overcast; sea, slight.										
0	14.80	32.421	6.08	24.05	0	14.80	32.42	6.08	24.05	387	0.00
10	14.78	32.426	6.24	24.06	10	14.78	32.43	6.24	24.06	386	0.04
20	14.46	32.495	6.27	24.18	20	14.46	32.50	6.27	24.18	375	0.08
30	12.68	32.568	6.65	24.59	30	12.68	32.57	6.65	24.59	336	0.11
50	9.72	32.645	7.06	25.18	50	9.72	32.64	7.06	25.18	280	0.18
75	8.57	32.661	7.06	25.38	75	8.57	32.66	7.06	25.38	260	0.24
99	7.49	32.715	6.41	25.58	100	7.47	32.73	6.37	25.59	240	0.31
123	7.14	33.120	5.75	25.94	125	7.12	33.15	5.68	25.97	204	0.36
147	6.94	33.483	5.02	26.25	150	6.92	33.51	4.96	26.28	175	0.41
172	6.80	33.685	4.57	26.43	175	6.79	33.70	4.47	26.45	159	0.45
196	6.71	33.831	3.80	26.56	200	6.70	33.84	3.73	26.57	148	0.49
221	6.65	33.900	3.38	26.62	250	6.39	33.94	2.78	26.69	136	0.57
246	6.45	33.944	2.80	26.68	300	5.76	33.95	2.55	26.78	128	0.63
296	5.79	33.949	2.60	26.77	400	5.07	34.00	1.58	26.90	116	0.76
347	5.49	33.974	2.09	26.83	500	4.44	34.07	1.00	27.02	105	0.88
437	4.80	34.014	1.25	26.94	600	4.27	34.20	0.55	27.14	93	0.98
528	4.29	34.089	0.90	27.05	700	4.11	34.28	0.34	27.22	86	1.08
617	4.27	34.221	0.47	27.16	800	3.91	34.32	0.34	27.28	80	1.17
712	4.09	34.283	0.31	27.23	1000	3.42	34.40	0.44	27.39	70	1.34
900	3.72	34.364	0.36	27.33	1200	2.94	34.46	0.54	27.48	61	1.49
1095	3.16	34.432	0.50	27.44	1500	2.39	34.51	0.64	27.57	53	1.68
1388	2.58	34.493	0.60	27.54							
1500	(2.39)a)	(34.513)a)	(0.64)a)	(27.57)							
5	CNAV OSHAWA; August 6, 1959; 0120 GCT; 50°00'N, 130°00'W; sounding, 1300 fm; wind, 230°, 15 kt; weather, fog; sea, moderate.										
0	14.60	32.478	6.03	24.14	0	14.60	32.48	6.03	24.14	379	0.00
10	14.34	32.477	5.61	24.19	10	14.34	32.48	5.61	24.19	374	0.04
19	14.31	32.486	5.86	24.20	20	14.28	32.49	5.86	24.21	372	0.08
29	14.06	32.521	5.86	24.28	30	13.76	32.53	5.92	24.35	359	0.11
48	9.30	32.627	6.92	25.24	50	9.14	32.63	6.87	25.27	271	0.18
72	7.64	32.701	6.38	25.54	75	7.57	32.73	6.33	25.57	242	0.24
96	7.13	32.887	5.96	25.76	100	7.08	32.96	5.70	25.83	218	0.30
120	6.85	33.291	4.52	26.12	125	6.81	33.37	4.52	26.18	184	0.35
144	6.65	33.649	4.50	26.42	150	6.61	33.68	4.45	26.45	159	0.39
168	6.50	33.755	4.30	26.53	175	6.42	33.77	4.18	26.55	149	0.43
191	6.26	33.815	3.92	26.61	200	6.17	33.84	3.68	26.63	142	0.47
215	6.04	33.875	3.32	26.68	250	5.68	33.91	3.14	26.75	130	0.54
239	5.80	33.903	3.29	26.73	300	5.22	33.93	2.51	26.82	124	0.61
287	5.31	33.919	2.64	26.80	400	4.71	34.01	1.64	26.95	111	0.73
385	4.74	33.999	1.72	26.93	500	4.51	34.07	1.09	27.02	105	0.84
572	4.39	34.113	0.75	27.06	600	4.21	34.22	0.69	27.17	91	0.95
578	4.33	34.191	0.77	27.13	700	3.82	34.34	0.44	27.30	78	1.04
675	3.85	34.319	0.46	27.28	800	3.68	34.41	0.38	27.37	72	1.12
772	3.74	34.401	0.38	27.36	1000	3.26	34.46	0.39	27.45	64	1.27
964	3.34	34.445	0.37	27.43	1200	2.88	34.52	0.52	27.53	56	1.41
1158	2.96	34.516	0.50	27.52	1500	2.40	34.53	0.82	27.59	51	1.60
1448	2.48	34.521	0.60	27.57	2000	1.90	34.60	1.32	27.68	42	1.87
1453	2.46	34.524	0.76	27.57							
1930	1.96	34.589	1.25	27.67							
2000	(1.90)a)	(34.597)a)	(1.32)a)	(27.68)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

6

CNAV OSHAWA; August 6, 1959; 1255 GCT; 50°03'N, 132°05'W; sounding, missing; wind, 230°, 15 kt; weather, moderate rain; sea, moderate.

0	14.60	32.003	6.15	23.77	0	14.60	32.00	6.15	23.77	414	0.00
10	14.36	32.201	6.15	23.97	10	14.36	32.20	6.15	23.97	395	0.04
19	14.36	32.235	5.95	24.00	20	14.23	32.25	5.98	24.04	388	0.08
29	13.22	32.338	6.25	24.31	30	12.96	32.35	6.31	24.37	357	0.12
48	9.18	32.585	7.13	25.22	50	8.98	32.60	7.10	25.26	272	0.18
70	7.29	32.677	6.83	25.57	75	7.17	32.70	6.81	25.61	239	0.24
93	6.81	32.770	6.74	25.71	100	6.71	32.85	6.52	25.79	222	0.30
117	6.50	33.024	6.03	25.95	125	6.49	33.18	5.54	26.08	194	0.36
140	6.46	33.450	4.72	26.29	150	6.36	33.55	4.56	26.38	166	0.40
163	6.25	33.663	4.36	26.49	175	6.09	33.74	4.17	26.57	148	0.44
186	5.95	33.808	4.01	26.64	200	5.87	33.84	3.92	26.67	138	0.48
210	5.81	33.861	3.85	26.70	250	5.35	33.90	3.20	26.79	127	0.55
233	5.54	33.890	3.49	26.75	300	5.06	33.96	2.37	26.86	120	0.61
280	5.05	33.927	2.74	26.84	400	4.86	34.06	1.19	26.97	110	0.73
354	5.08	34.030	1.49	26.92	500	4.38	34.12	1.02	27.07	100	0.84
444	4.67	34.090	0.92	27.01	600	4.15	34.20	0.63	27.15	92	0.94
532	4.23	34.135	1.06	27.10	700	3.92	34.29	0.47	27.25	83	1.04
620	4.13	34.215	0.50	27.17	800	3.65	34.35	0.46	27.33	75	1.12
710	3.90	34.295	0.47	27.26	1000	3.19	34.44	0.47	27.44	65	1.28
891	3.43	34.408	0.46	27.39	1200	2.83	34.48	0.53	27.51	58	1.42
1080	3.03	34.466	0.48	27.48	1500	2.41	34.52	0.80	27.57	53	1.61
1373	2.58	34.500	0.59	27.55	2000	1.87	34.58	1.47	27.66	44	1.90
1864	2.00	34.561	1.30	27.64							
2000	(1.87)a)	(34.575)a)	(1.47)a)	(27.66)							

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CNAV OSHAWA; August 6, 1959; 2314 GCT; 50°02'N, 133°59'W; sounding, 1650 fm; wind, 360°, 2 kt; weather, overcast; sea, slight.

0	14.20	32.544	7.91	24.27	0	14.20	32.54	7.91	24.27	366	0.00
10	13.67	32.575	6.09	24.40	10	13.67	32.58	6.09	24.40	354	0.04
20	13.60	32.578	5.69	24.42	20	13.60	32.58	5.69	24.42	352	0.07
30	11.58	32.635	6.07	24.85	30	11.58	32.64	6.07	24.85	311	0.10
49	8.48	32.665	6.27	25.39	50	8.43	32.67	6.29	25.41	258	0.16
74	7.38	32.809	6.66	25.66	75	7.35	32.82	6.66	25.67	233	0.22
99	(6.73)b)	32.953	6.79	(25.87)	100	6.71	32.97	6.78	25.88	213	0.28
123	6.24	33.340	6.47	26.23	125	6.22	33.37	6.37	26.26	177	0.33
148	6.06	33.711	5.34	26.55	150	6.03	33.72	5.28	26.56	148	0.37
173	5.72	33.756	4.52	26.63	175	5.69	33.76	4.49	26.64	141	0.41
197	5.38	33.863	4.19	26.75	200	5.36	33.87	4.07	26.76	129	0.44
222	5.23	33.889	3.19	26.79	250	5.14	33.91	3.10	26.82	124	0.51
246	5.16	33.904	3.15	26.81	300	4.86	33.96	2.58	26.89	117	0.57
295	4.89	33.959	2.62	26.89	400	4.40	34.04	1.81	27.01	106	0.69
391	4.44	34.025	1.88	26.99	500	4.06	34.21	1.11	27.17	91	0.79
489	4.06	34.202	1.16	27.17	600	4.02	34.24	0.72	27.20	88	0.88
586	4.07	(34.239)c)	0.71	(27.20)	700	3.72	34.28	0.68	27.26	82	0.98
684	3.76	34.270	0.76	27.25	800	3.49	34.31	0.30	27.31	77	1.06
782	3.53	34.297	0.30	27.30	1000	3.08	34.40	0.34	27.42	67	1.22
978	3.12	34.394	0.34	27.41	1200	2.73	34.46	0.30	27.50	59	1.36
1177	2.77	34.455	0.29	27.49	1500	2.33	34.51	0.48	27.58	52	1.56
1475	2.35	34.505	0.45	27.57	2000	1.91	34.64	1.10	27.71	39	1.83
1977	1.93	34.635	1.08	27.71							
2000	(1.91)a)	(34.640)a)	(1.10)a)	(27.71)							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated by two-point logarithmic method.
c) Observed salinity value questionable. Value interpolated by two-point logarithmic method.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
8	CNAV OSHAWA; August 7, 1959; 0916 GCT; 50°00'N, 135°59'W; sounding, 1800 fm; wind, 220°, 10 kt; weather, partly cloudy; sea, slight.											
	0	12.70	32.728	6.10	24.71	0	12.70	32.73	6.10	24.71	324	0.00
	10	12.70	32.656	6.46	24.66	10	12.70	32.66	6.46	24.66	329	0.03
	20	12.56	32.663	6.12	24.69	20	12.56	32.66	6.12	24.69	326	0.07
	30	12.50	32.679	6.64	24.71	30	12.50	32.68	6.64	24.71	324	0.10
	49	9.90	32.707	6.82	25.20	50	9.79	32.71	6.82	25.22	276	0.16
	73	7.74	32.781	6.90	25.59	75	7.67	32.80	6.88	25.61	239	0.22
	98	6.94	32.949	6.61	25.83	100	6.91	32.97	6.60	25.85	216	0.28
	122	6.63	33.162	6.43	26.04	125	6.60	33.22	6.24	26.09	193	0.33
	146	6.44	33.577	5.04	26.39	150	6.36	33.61	5.00	26.43	161	0.38
	170	6.00	33.767	4.82	26.60	175	5.91	33.77	4.77	26.62	143	0.42
	194	5.60	33.798	4.60	26.67	200	5.52	33.81	4.40	26.69	136	0.45
	219	5.29	33.843	3.81	26.75	250	5.00	33.88	3.37	26.81	125	0.52
	243	5.06	33.872	3.46	26.80	300	4.63	33.91	2.70	26.88	118	0.58
	292	4.68	33.908	2.84	26.87	400	4.06	33.98	1.16	27.00	107	0.70
	397	4.06	33.981	1.18	26.99	500	4.02	34.10	0.95	27.09	98	0.81
	495	4.03	34.097	0.96	27.09	600	3.82	34.17	0.74	27.17	91	0.91
	593	3.84	34.166	0.74	27.16	700	3.62	34.25	0.68	27.25	83	1.00
	691	3.64	34.246	0.71	27.25	800	3.44	34.31	0.46	27.32	76	1.09
	790	3.46	34.311	0.46	27.31	1000	3.08	34.37	0.45	27.40	69	1.25
	987	3.11	34.367	0.43	27.39	1200	2.73	34.46	0.78	27.50	59	1.39
	1185	2.75	34.452	0.76	27.49							
	1200	(2.73)a)	(34.458)a)	(0.78)a)	(27.50)							
9	CNAV OSHAWA; August 7, 1959; 2135 GCT; 50°02'N, 138°21'W; sounding, 2000 fm; wind, 220°, 10 kt; weather, partly cloudy; sea, slight.											
	0	12.40	32.821	6.38	24.84	0	12.40	32.82	6.38	24.84	312	0.00
	10	12.31	32.707	5.90	24.77	10	12.31	32.71	5.90	24.77	319	0.03
	20	12.26	32.682	5.86	24.76	20	12.26	32.68	5.86	24.76	320	0.06
	30	12.20	32.690	6.34	24.78	30	12.20	32.69	6.34	24.78	318	0.10
	50	10.32	32.722	6.55	25.14	50	10.32	32.72	6.55	25.14	283	0.16
	74	6.80	32.853	6.79	25.78	75	6.79	32.86	6.79	25.78	222	0.22
	99	(6.48)b)	32.968	6.79	(25.91)	100	6.47	32.98	6.74	25.92	209	0.28
	123	6.24	33.257	5.91	26.17	125	6.25	33.29	5.81	26.19	184	0.32
	148	6.38	33.644	4.72	26.46	150	6.34	33.65	4.70	26.47	157	0.37
	172	5.94	33.749	4.61	26.59	175	5.89	33.76	4.60	26.61	144	0.41
	196	5.56	33.811	4.51	26.69	200	5.50	33.81	4.45	26.70	135	0.44
	220	5.20	33.821	4.16	26.74	250	4.89	33.84	3.55	26.79	127	0.51
	245	4.92	33.832	3.67	26.78	300	4.62	33.90	2.44	26.87	119	0.57
	294	4.65	33.894	2.51	26.86	400	4.25	33.99	1.46	26.98	109	0.69
	400	4.25	33.991	1.46	26.98	500	4.04	33.99	0.76	27.00	107	0.80
	500	4.04	33.993	0.76	27.00	600	3.89	34.21	0.60	27.19	89	0.91
	600	3.89	34.208	0.60	27.19	700	3.64	34.24	0.52	27.24	84	1.00
	700	3.64	34.242	0.52	27.24	800	3.40	34.30	0.39	27.31	77	1.09
	800	3.40	34.299	0.39	27.31	1000	3.04	34.38	0.56	27.41	68	1.25
	1000	3.04	34.382	0.56	27.41	1200	2.72	34.44	0.53	27.48	61	1.39
	1200	2.72	34.435	0.53	27.48	1500	2.36	34.44	0.73	27.51	58	1.59
	1500	2.36	34.438	0.73	27.51	2000	1.94	34.58	1.29	27.66	44	1.89
	1505	2.34	34.514	0.68	27.58	2500	1.71	34.64	1.75	27.72	38	2.15
	1880	2.00	34.563	1.20	27.64	3000	1.58	34.66	2.22	27.75	36	2.38
	2366	1.76	34.625	1.55	27.71	3500	1.54	34.67	2.26	27.77	34	2.62
	2856	1.60	34.658	2.25	27.75	4000	1.56	34.70	2.65	27.78	33	2.85
	3354	1.53	34.667	2.14	27.76							
	3851	1.55	34.689	2.54	27.78							
	4000	(1.56)a)	(34.695)a)	(2.65)a)	(27.78)							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV OSHAWA; August 8, 1959; 0715 GCT; 50°02'N, 140°00'W; sounding, missing; wind, calm; weather, missing; sea, smooth.

0	12.20	32.731	6.31	24.81	0	12.20	32.73	6.31	24.81	315	0.00
10	12.10	32.700	6.32	24.81	10	12.10	32.70	6.32	24.81	315	0.03
20	11.89	32.691	6.28	24.84	20	11.89	32.69	6.28	24.84	312	0.06
30	11.86	32.689	6.32	24.84	30	11.86	32.69	6.32	24.84	312	0.10
50	7.44	32.816	7.13	25.66	50	7.44	32.82	7.13	25.66	234	0.15
75	5.33	32.890	6.89	25.99	75	5.33	32.89	6.89	25.99	202	0.20
100	4.94	32.910	6.79	26.05	100	4.94	32.91	6.79	26.05	197	0.26
125	5.30	33.393	5.14	26.39	125	5.30	33.39	5.14	26.39	164	0.30
150	5.14	33.704	3.29	26.65	150	5.14	33.70	3.29	26.65	140	0.34
175	4.67	33.792	3.53	26.78	175	4.67	33.79	3.53	26.78	128	0.37
200	4.42	33.809	3.27	26.82	200	4.42	33.81	3.27	26.82	124	0.41
225	4.26	33.830	3.18	26.85	250	4.20	33.84	2.86	26.87	119	0.47
250	4.20	33.840	2.86	26.87	300	3.95	33.91	2.05	26.95	111	0.53
300	3.95	33.912	2.05	26.95	400	3.92	34.03	1.24	27.05	102	0.64
392	3.93	34.021	1.27	27.04	500	3.76	34.12	0.95	27.14	93	0.74
490	3.77	34.116	0.99	27.13	600	3.62	34.20	0.71	27.21	87	0.84
589	3.64	34.190	0.71	27.20	700	3.45	34.25	0.67	27.27	81	0.93
688	3.47	34.244	0.69	27.26	800	3.32	34.32	0.55	27.33	75	1.01
786	3.35	34.309	0.56	27.32	1000	2.95	34.38	0.47	27.42	67	1.17
983	2.97	34.381	0.46	27.42	1200	2.69	34.43	0.63	27.48	61	1.31
1181	2.72	34.425	0.62	27.47	1500	2.32	34.51	0.76	27.58	52	1.51
1478	2.34	34.507	0.73	27.57	2000	1.92	34.59	1.32	27.67	43	1.79
1976	1.94	34.583	1.30	27.66							
2000	(1.92)a)	(34.586)a)	(1.32)a)	(27.67)							

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CNAV OSHAWA; August 8, 1959; 1921 GCT; 50°58'N, 143°00'W; sounding, missing; wind, 090°, 20 kt; weather, overcast; sea, slight.

0	11.40	32.662	6.25	24.91	0	11.40	32.66	6.25	24.91	305	0.00
10	11.60	32.752	6.12	24.94	10	11.60	32.75	6.12	24.94	302	0.03
20	11.38	32.756	6.12	24.98	20	11.38	32.76	6.12	24.98	299	0.06
30	11.28	32.765	6.32	25.01	30	11.28	32.77	6.32	25.01	296	0.09
49	6.25	32.857	5.70	25.85	50	6.22	32.86	5.73	25.86	215	0.14
73	5.74	32.940	6.33	25.98	75	5.73	32.94	6.31	25.98	204	0.20
98	5.64	32.916	6.03	25.97	100	5.68	32.97	5.89	26.01	201	0.25
122	6.06	33.536	4.56	26.41	125	6.04	33.57	4.41	26.44	160	0.29
146	5.92	33.777	3.46	26.62	150	5.84	33.78	3.54	26.63	142	0.33
170	5.46	33.813	3.88	26.70	175	5.37	33.81	3.88	26.72	133	0.36
194	5.03	33.816	3.85	26.76	200	4.91	33.83	3.76	26.78	128	0.40
219	4.57	33.856	3.49	26.84	250	4.57	33.88	2.71	26.86	120	0.46
243	4.57	33.865	2.86	26.85	300	4.52	33.96	1.88	26.92	114	0.52
291	4.56	33.947	1.95	26.91	400	4.15	34.04	1.27	27.03	104	0.64
392	4.18	34.040	1.30	27.03	500	3.83	34.11	0.93	27.12	95	0.74
490	3.85	34.098	0.95	27.11	600	3.67	34.19	0.71	27.20	88	0.84
589	3.70	34.182	0.73	27.19	700	3.47	34.25	0.55	27.27	81	0.93
687	3.49	34.244	0.55	27.26	800	3.30	34.30	0.55	27.32	76	1.01
785	3.33	34.296	0.55	27.31	1000	2.96	34.38	0.57	27.42	67	1.17
982	2.99	34.379	0.57	27.41	1200	2.70	34.44	0.57	27.48	61	1.31
1276	2.61	34.452	0.57	27.50	1500	2.35	34.50	0.73	27.57	53	1.51
1572	2.28	34.519	0.77	27.59	2000	1.98	34.58	1.34	27.66	44	1.80
2063	1.94	34.585	1.42	27.67							
2068	1.94	34.587	(1.43)a)	27.67							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
12	CNAV OSHAWA; August 9, 1959; 0227 GCT; 50°00'N, 143°00'W; sounding, missing; wind, 090°, 8 kt; weather, fog; sea, slight.										
0	12.00	32.672	5.35	24.80	0	12.00	32.67	5.35	24.80	318	0.00
10	11.80	32.681	6.38	24.85	10	11.80	32.68	6.38	24.85	311	0.03
20	11.72	32.685	6.28	24.87	20	11.72	32.68	6.28	24.87	309	0.06
30	11.66	32.778	6.44	24.95	30	11.66	32.78	6.44	24.95	301	0.09
49	8.22	32.786	6.91	25.53	50	8.12	32.79	6.91	25.54	245	0.15
74	6.22	32.867	6.92	25.86	75	6.20	32.87	6.91	25.87	214	0.21
99	5.82	32.971	6.55	26.00	100	5.83	32.99	6.48	26.01	201	0.26
123	6.04	33.373	5.10	26.29	125	6.03	33.40	5.01	26.31	172	0.31
148	5.94	33.733	4.10	26.58	150	5.91	33.74	4.07	26.59	146	0.35
172	(5.63)a)	33.803	3.72	(26.67)	175	5.60	33.81	3.64	26.68	137	0.38
197	5.35	33.843	3.10	26.74	200	5.31	33.84	3.08	26.75	130	0.42
221	5.02	33.847	2.97	26.78	250	4.52	33.86	2.80	26.84	122	0.48
246	4.52	33.847	2.90	26.84	300	4.55	33.94	1.76	26.91	115	0.54
295	4.57	33.938	1.76	26.90	400	4.20	34.02	1.72	27.01	106	0.66
400	4.20	34.019	1.72	27.01	500	3.93	34.10	0.96	27.10	97	0.76
500	3.93	34.105	0.96	27.10	600	3.70	34.17	0.76	27.18	90	0.86
600	3.70	34.174	0.76	27.18	700	3.47	34.25	0.65	27.27	81	0.96
700	3.47	34.251	0.65	27.27	800	3.28	34.29	0.60	27.31	77	1.04
800	3.28	34.287	0.60	27.31	1000	2.93	34.36	0.76	27.40	69	1.20
1000	2.93	34.358	0.76	27.40	1200	2.65	34.43	0.72	27.48	61	1.34
1300	2.53	34.459	0.69	27.52	1500	2.34	34.51	0.78	27.57	53	1.54
1600	2.25	34.530	0.83	27.60	2000	1.95	34.58	1.34	27.66	44	1.83
2100	1.88	34.588	1.46	27.67							
2105	1.91	34.593	1.47	27.67							
13	CNAV OSHAWA; August 9, 1959; 0902 GCT; 48°58'N, 143°00'W; sounding, 1900 fm; wind, 270°, 5 kt; weather, fog; sea, slight.										
0	11.80	32.716	6.40	24.88	0	11.80	32.72	6.40	24.88	308	0.00
10	12.38	32.717	6.38	24.77	10	12.38	32.72	6.38	24.77	319	0.03
20	12.12	32.753	6.33	24.84	20	12.12	32.75	6.33	24.84	312	0.06
30	10.21	32.862	6.69	25.27	30	10.21	32.86	6.69	25.27	271	0.09
50	7.28	32.952	6.89	25.79	50	7.28	32.95	6.89	25.79	222	0.14
75	5.64	33.022	6.79	26.06	75	5.64	33.02	6.79	26.06	196	0.20
100	5.30	33.066	6.69	26.13	100	5.30	33.07	6.69	26.13	189	0.24
124	5.80	33.476	5.50	26.40	125	5.80	33.49	5.45	26.41	163	0.29
149	5.70	33.781	4.54	26.65	150	5.67	33.78	4.51	26.65	140	0.33
174	5.06	33.824	4.13	26.76	175	5.05	33.82	4.12	26.76	129	0.36
199	4.76	33.844	3.80	26.81	200	4.75	33.84	3.79	26.81	125	0.39
223	4.48	(33.847)a)	3.51	(26.84)	250	4.31	33.85	3.15	26.86	120	0.46
248	4.32	33.850	(3.17)a)	26.86	300	4.08	33.88	2.56	26.91	115	0.52
298	4.08	33.882	2.59	26.91	400	3.91	34.02	1.58	27.04	103	0.63
370	3.93	33.963	1.86	26.99	500	3.80	34.15	0.95	27.15	92	0.73
456	3.87	34.106	1.12	27.11	600	3.65	34.21	0.82	27.22	86	0.83
548	3.74	34.187	0.80	27.19	700	3.47	34.26	0.72	27.27	81	0.92
640	3.58	34.231	0.84	27.24	800	3.26	34.31	0.74	27.33	75	1.00
731	3.41	34.274	0.65	27.29	1000	2.92	34.38	0.76	27.42	67	1.16
912	3.05	34.355	0.86	27.39	1200	2.67	34.44	0.57	27.49	60	1.30
1198	2.67	34.442	0.57	27.49	1500	2.32	34.53	1.24	27.59	51	1.49
1485	2.33	34.530	1.24	27.59	2000	1.94	34.60	1.30	27.67	43	1.77
1966	1.96	34.592	1.30	27.67							
2000	(1.94)b)	(34.596)b)	(1.30)b)	(27.67)							

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 9, 1959; 1956 GCT; 49°01'N, 145°00'W; sounding, missing; wind, 330°, 15 kt; weather, cloudy; sea, moderate. 14

0	11.80	32.829	6.45	24.96	0	11.80	32.83	6.45	24.96	300	0.00
10	11.90	32.764	6.59	24.89	10	11.90	32.76	6.59	24.89	307	0.03
20	11.78	32.767	6.35	24.92	20	11.78	32.77	6.35	24.92	304	0.06
30	11.75	32.759	6.44	24.92	30	11.75	32.76	6.44	24.92	304	0.09
49	5.98	32.955	7.15	25.96	50	5.93	32.96	7.15	25.97	204	0.14
73	5.06	32.984	7.06	26.09	75	5.04	32.98	7.04	26.10	192	0.19
96	4.86	32.991	6.94	26.12	100	4.90	33.03	6.83	26.15	187	0.24
121	5.11	33.218	6.33	26.27	125	5.13	33.31	6.03	26.34	169	0.29
144	5.21	33.709	4.70	26.65	150	5.17	33.74	4.56	26.68	137	0.32
168	5.04	33.811	4.16	26.75	175	4.94	33.81	4.08	26.76	129	0.36
192	4.70	33.819	3.90	26.80	200	4.59	33.82	3.81	26.81	125	0.39
217	4.37	33.835	3.62	26.84	250	4.17	33.86	3.20	26.88	118	0.45
241	4.22	33.849	3.37	26.87	300	3.94	33.90	2.42	26.94	112	0.51
290	3.96	33.883	2.53	26.92	400	3.80	34.04	1.46	27.07	100	0.62
396	3.80	34.041	1.48	27.07	500	3.75	34.13	1.05	27.14	93	0.72
495	3.76	34.128	1.06	27.14	600	3.58	34.21	0.90	27.23	85	0.82
594	3.59	34.210	0.91	27.22	700	3.40	34.27	0.67	27.29	79	0.91
693	3.42	34.269	0.67	27.28	800	3.19	34.32	0.63	27.35	74	0.99
792	3.21	34.319	0.63	27.34	1000	2.86	34.39	0.69	27.43	66	1.14
991	2.87	34.387	(0.69)a)	27.43	1200	2.62	34.45	0.74	27.50	59	1.28
1290	2.53	34.479	0.76	27.53	1500	2.31	34.52	0.86	27.58	52	1.47
1588	2.23	34.533	0.91	27.60	2000	1.96	34.59	1.31	27.67	43	1.76
2088	1.91	34.596	1.39	27.68							
2093	1.89	34.598	1.52	27.68							

CNAV OSHAWA; August 10, 1959; 0313 GCT; 49°00'N, 147°00'W; sounding, ±2300 fm; wind, 330°, 15 kt; weather, cloudy; sea, moderate. 15

0	11.30	32.771	6.12	25.01	0	11.30	32.77	6.12	25.01	296	0.00
10	11.36	32.720	6.56	24.96	10	11.36	32.72	6.56	24.96	300	0.03
20	11.00	32.721	6.51	25.02	20	11.00	32.72	6.51	25.02	295	0.06
30	10.68	32.723	6.51	25.08	30	10.68	32.72	6.51	25.08	289	0.09
50	5.94	32.817	6.12	25.86	50	5.94	32.82	6.12	25.86	215	0.14
75	4.49	32.879	5.84	26.07	75	4.49	32.88	5.84	26.07	195	0.19
100	4.21	32.898	6.45	26.12	100	4.21	32.90	6.45	26.12	190	0.24
125	4.54	33.254	5.96	26.37	125	4.54	33.25	5.96	26.37	166	0.29
150	5.16	33.792	4.26	26.72	150	5.16	33.79	4.26	26.72	133	0.32
175	4.85	33.827	3.61	26.79	175	4.85	33.83	3.61	26.79	127	0.36
200	4.41	33.876	3.43	26.87	200	4.41	33.88	3.43	26.87	119	0.39
225	4.12	33.884	3.27	26.91	250	4.02	33.89	2.97	26.92	114	0.45
250	4.02	33.891	2.97	26.92	300	3.89	33.91	2.37	26.95	111	0.51
300	3.89	33.910	2.37	26.95	400	3.83	34.06	1.38	27.08	99	0.62
393	3.84	34.051	1.41	27.07	500	3.74	34.17	1.05	27.17	91	0.72
492	3.76	34.162	1.05	27.17	600	3.56	34.23	1.08	27.24	84	0.81
592	3.58	34.221	1.10	27.23	700	3.36	34.29	0.85	27.31	77	0.89
691	3.38	34.290	0.87	27.31	800	3.19	34.32	0.69	27.35	74	0.98
790	3.21	34.320	0.69	27.35	1000	2.87	34.39	0.71	27.43	66	1.13
988	2.89	34.389	0.71	27.43	1200	2.59	34.46	0.64	27.51	58	1.27
1284	2.48	34.483	0.62	27.54	1500	2.29	34.52	0.75	27.59	51	1.46
1581	2.22	34.537	0.80	27.61	2000	1.95	34.60	1.21	27.67	43	1.73
2076	1.91	34.606	1.28	27.68							
2081	1.91	34.602	1.36	27.68							

a) Value interpolated by two-point logarithmic method.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
16	CNAV OSHAWA; August 10, 1959; 0924 GCT; 50°00'N, 147°00'W; sounding, 2300 fm; wind, 350°, 10 kt; weather, partly cloudy; sea, slight.											
	0	11.20	32.739	6.63	25.00	0	11.20	32.74	6.63	25.00	297	0.00
	10	11.20	32.736	6.59	25.00	10	11.20	32.74	6.59	25.00	297	0.03
	20	11.10	32.741	6.23	25.02	20	11.10	32.74	6.23	25.02	295	0.06
	30	10.82	32.743	6.48	25.07	30	10.82	32.74	6.48	25.07	290	0.09
	50	6.59	32.815	7.10	25.78	50	6.59	32.82	7.10	25.78	222	0.14
	75	4.63	32.870	7.11	26.05	75	4.63	32.87	7.11	26.05	197	0.19
	100	4.11	32.881	6.96	26.11	100	4.11	32.88	6.96	26.11	191	0.24
	125	4.34	33.168	6.25	26.32	125	4.34	33.17	6.25	26.32	171	0.29
	150	4.60	33.763	4.10	26.76	150	4.60	33.76	4.10	26.76	129	0.33
	175	4.38	33.812	3.65	26.82	175	4.38	33.81	3.65	26.82	124	0.36
	200	4.18	33.827	3.36	26.86	200	4.18	33.83	3.36	26.86	120	0.39
	225	3.98	33.844	3.17	26.89	250	3.87	33.87	2.25	26.92	114	0.45
	250	3.87	33.868	2.25	26.92	300	3.71	33.91	2.22	26.97	110	0.51
	300	3.71	33.912	2.22	26.97	400	3.66	34.05	1.44	27.09	98	0.62
	382	3.66	34.033	1.55	27.07	500	3.63	34.15	1.12	27.17	91	0.71
	477	3.66	34.125	1.05	27.15	600	3.48	34.23	1.18	27.25	83	0.81
	572	3.53	34.218	1.32	27.23	700	3.33	34.28	0.82	27.30	78	0.89
	668	3.38	34.266	0.85	27.29	800	3.17	34.32	0.76	27.35	74	0.97
	764	3.23	34.309	0.76	27.33	1000	2.85	34.40	0.75	27.44	65	1.13
	956	2.92	34.379	0.77	27.42	1200	2.57	34.46	0.63	27.52	57	1.26
	1252	2.51	34.480	0.60	27.54	1500	2.29	34.53	0.83	27.59	51	1.45
	1510	2.28	34.529	0.84	27.59	2000	1.95	34.60	1.30	27.68	42	1.73
	2035	1.93	34.603	1.33	27.68	2500	1.73	34.65	1.81	27.74	37	1.98
	2556	1.71	34.658	1.87	27.74	3000	1.59	34.67	2.09	27.76	35	2.21
	3079	1.57	34.669	2.13	27.76	3500	1.54	34.68	2.33	27.77	34	2.44
	3587	1.54	34.680	2.37	27.77	4000	1.52	34.68	2.36	27.77	34	2.67
	4110	1.52	34.681	(2.36)a)	27.77							
	4115	1.53	34.681	2.36	27.77							
17	CNAV OSHAWA; August 10, 1959; 1815 GCT; 51°00'N, 147°00'W; sounding, 2300 fm; wind, 360°, 5 kt; weather, cloudy; sea, slight.											
	0	12.40	32.831	5.61	24.85	0	12.40	32.83	5.61	24.85	311	0.00
	10	11.53	32.789	6.10	24.98	10	11.53	32.79	6.10	24.98	299	0.03
	20	11.39	32.771	6.06	24.99	20	11.39	32.77	6.06	24.99	298	0.06
	30	11.16	32.856	6.35	25.10	30	11.16	32.86	6.35	25.10	287	0.09
	50	6.99	32.909	6.99	25.80	50	6.99	32.91	6.99	25.80	221	0.14
	75	4.35	32.941	6.94	26.14	75	4.35	32.94	6.94	26.14	188	0.19
	100	4.18	33.605	6.45	26.68	100	4.18	33.60	6.45	26.68	137	0.23
	125	4.06	33.770	4.19	26.82	125	4.06	33.77	4.19	26.82	124	0.27
	150	3.82	33.819	3.25	26.89	150	3.82	33.82	3.25	26.89	117	0.30
	175	3.73	33.853	2.71	26.92	175	3.73	33.85	2.71	26.92	114	0.33
	200	3.64	33.897	2.53	26.97	200	3.64	33.90	2.53	26.97	110	0.36
	225	3.57	33.882	2.25	26.96	250	3.58	33.90	1.87	26.98	109	0.41
	250	3.58	33.904	1.87	26.98	300	3.59	33.97	1.47	27.03	104	0.47
	300	3.59	33.968	1.47	27.03	400	3.64	34.12	0.82	27.15	92	0.57
	400	3.64	34.123	0.82	27.15	500	3.54	34.22	0.55	27.24	84	0.66
	500	3.54	34.225	0.55	27.24	600	3.37	34.28	0.48	27.30	78	0.75
	600	3.37	34.283	0.48	27.30	700	3.18	34.33	0.49	27.36	73	0.83
	700	3.18	34.333	0.49	27.36	800	3.04	34.37	0.58	27.40	69	0.90
	800	3.04	34.366	0.58	27.40	1000	2.73	34.43	0.60	27.48	61	1.05
	1000	2.73	34.433	0.60	27.48	1200	2.52	34.48	0.64	27.54	56	1.18
	1300	2.43	34.502	0.66	27.56	1500	2.26	34.55	0.81	27.61	49	1.36
	1600	2.19	34.567	0.87	27.63	2000	1.94	34.62	1.25	27.69	41	1.63
	2100	1.88	34.625	1.33	27.70							
	2105	1.95	34.625	1.47	27.70							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 11, 1959; 0208 GCT; 52°00'N, 147°15'W; sounding, missing; wind, 090°, 3 kt; weather, partly cloudy; sea, smooth. 18

0	12.40	32.761	6.65	24.80	0	12.40	32.76	6.65	24.80	316	0.00
10	11.67	32.719	6.55	24.90	10	11.67	32.72	6.55	24.90	306	0.03
20	11.34	32.720	6.78	24.96	20	11.34	32.72	6.78	24.96	300	0.06
30	10.22	32.741	6.84	25.17	30	10.22	32.74	6.84	25.17	280	0.09
50	5.28	32.835	7.28	25.95	50	5.28	32.84	7.28	25.95	206	0.14
75	4.71	32.869	6.93	26.04	75	4.71	32.87	6.93	26.04	198	0.19
100	5.08	33.199	5.31	26.26	100	5.08	33.20	5.31	26.26	177	0.24
125	5.75	33.705	3.16	26.58	125	5.75	33.70	3.16	26.58	146	0.28
150	5.70	33.805	2.67	26.67	150	5.70	33.80	2.67	26.67	138	0.32
175	5.56	33.860	2.43	26.73	175	5.56	33.86	2.43	26.73	132	0.35
200	5.32	33.895	2.24	26.78	200	5.32	33.90	2.24	26.78	128	0.38
225	5.04	(33.903)a)	2.17	(26.82)	250	4.92	33.91	1.87	26.84	122	0.45
250	4.92	33.911	1.87	26.84	300	4.63	33.93	1.43	26.89	117	0.51
300	4.63	33.933	1.43	26.89	400	4.29	33.98	1.83	26.97	110	0.63
395	4.31	33.981	1.89	26.97	500	4.01	34.06	0.74	27.06	101	0.74
495	4.02	34.055	0.75	27.06	600	3.75	34.20	0.60	27.20	88	0.84
594	3.77	34.195	0.63	27.19	700	3.49	34.26	0.37	27.27	81	0.93
694	3.50	34.260	0.36	27.27	800	3.36	34.29	0.47	27.30	78	1.01
893	3.26	34.309	0.56	27.33	1000	2.94	34.39	0.56	27.42	67	1.17
993	2.95	34.383	0.56	27.42	1200	2.66	34.48	0.59	27.52	57	1.31
1292	2.55	34.511	0.60	27.56	1500	2.35	34.54	0.72	27.59	51	1.50
1591	2.27	34.548	0.76	27.61	2000	1.98	34.59	1.27	27.67	43	1.78
2089	1.92	34.603	1.37	27.68							
2094	(1.92)b)	34.606	(1.37)b)	(27.68)							

CNAV OSHAWA; August 11, 1959; 0822 GCT; 53°00'N, 147°27'W; sounding, missing; wind, 090°, 2 kt; weather, partly cloudy; sea, smooth. 19

0	11.70	32.740	6.43	24.91	0	11.70	32.74	6.43	24.91	305	0.00
8	12.06	32.706	6.56	24.82	10	11.98	32.71	6.43	24.83	313	0.03
18	11.74	32.712	6.00	24.88	20	11.68	32.71	6.10	24.89	307	0.06
27	11.50	32.711	6.40	24.93	30	10.85	32.73	6.51	25.06	291	0.09
46	8.06	32.803	7.00	25.56	50	7.41	32.83	6.93	25.68	232	0.14
69	4.82	32.956	6.69	26.10	75	4.70	33.06	6.29	26.19	184	0.20
93	4.38	33.323	5.26	26.44	100	4.37	33.43	4.73	26.53	151	0.24
116	4.36	33.663	3.63	26.71	125	4.22	33.71	3.25	26.76	129	0.28
139	4.02	33.784	2.70	26.84	150	3.96	33.81	2.71	26.86	120	0.31
163	3.90	33.830	2.73	26.89	175	3.84	33.85	2.60	26.91	115	0.34
187	3.78	33.864	2.48	26.93	200	3.80	33.87	2.28	26.93	113	0.37
210	3.82	33.873	2.15	26.93	250	3.66	33.99	1.42	27.04	103	0.42
234	3.66	33.933	1.48	26.99	300	3.67	34.11	1.27	27.13	94	0.47
280	3.67	34.089	(1.32)a)	27.12	400	3.66	34.18	1.02	27.19	89	0.57
397	3.66	34.179	1.02	27.19	500	3.59	34.22	0.99	27.23	85	0.66
497	3.60	34.215	1.00	27.22	600	3.43	34.24	0.67	27.26	82	0.75
596	3.44	34.239	0.67	27.26	700	3.25	34.30	0.57	27.32	76	0.83
696	3.26	34.293	0.57	27.32	800	3.09	34.34	0.53	27.37	72	0.91
795	3.10	34.337	0.53	27.37	1000	2.83	34.40	0.62	27.44	65	1.06
994	2.84	34.398	0.62	27.44	1200	2.58	34.46	0.68	27.51	58	1.20
1293	2.47	34.478	0.71	27.54	1500	2.28	34.52	0.83	27.58	52	1.39
1592	2.20	34.533	0.88	27.60	2000	1.92	34.59	1.32	27.67	43	1.67
2090	1.87	34.603	1.41	27.69							
2095	1.89	34.608	1.46	27.69							

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

20 CNAV OSHAWA; August 11, 1959; 1503 GCT; 54°00'N, 147°45'W; sounding, missing; wind, 120°, 15 kt; weather, cloudy; sea, slight.

0	12.00	32.807	6.59	24.91	0	12.00	32.81	6.59	24.91	305	0.00
9	11.98	32.795	7.04	24.90	10	11.86	32.80	6.99	24.93	303	0.03
18	11.05	32.794	6.62	25.07	20	10.16	32.80	6.75	25.23	275	0.06
28	7.11	32.831	7.22	25.72	30	6.88	32.84	7.25	25.76	224	0.08
47	5.26	32.903	7.39	26.01	50	5.01	32.92	7.31	26.05	197	0.13
71	3.58	33.027	6.88	26.28	75	3.59	33.09	6.40	26.33	170	0.17
96	3.64	33.358	4.21	26.54	100	3.70	33.42	3.90	26.58	146	0.21
120	3.96	33.677	2.45	26.76	125	3.97	33.72	2.17	26.79	127	0.25
144	4.02	33.868	1.22	26.91	150	4.03	33.89	1.11	26.92	114	0.28
168	4.04	33.941	0.82	26.96	175	4.02	33.96	0.75	26.98	109	0.31
192	3.98	33.998	0.58	27.01	200	3.96	34.01	0.56	27.02	105	0.34
216	3.91	34.029	0.53	27.05	250	3.89	34.06	0.63	27.07	100	0.39
240	3.90	34.049	0.65	27.06	300	3.81	34.12	0.55	27.12	95	0.44
288	3.84	34.094	0.54	27.10	400	3.61	34.25	0.56	27.25	83	0.53
365	3.67	34.224	0.58	27.22	500	3.43	34.28	0.49	27.30	78	0.62
456	3.52	34.280	0.53	27.28	600	3.25	34.31	0.44	27.33	75	0.70
546	3.34	34.290	0.46	27.31	700	3.10	34.34	0.47	27.38	71	0.78
636	3.20	34.323	0.41	27.35	800	2.95	34.38	0.50	27.41	68	0.85
718	3.07	34.350	0.48	27.38	1000	2.65	34.44	0.66	27.49	60	0.99
912	2.81	34.407	0.54	27.45	1200	2.43	34.49	0.80	27.55	55	1.12
1081	2.52	34.469	0.76	27.53	1500	2.19	34.53	1.03	27.60	50	1.30
1452	2.26	34.522	0.85	27.59	2000	1.84	34.61	1.57	27.69	41	1.57
1457	2.23	34.521	0.99	27.59	2500	1.66	34.64	2.14	27.74	37	1.81
1669	2.04	34.578	1.18	27.65							
2155	1.76	34.619	1.72	27.71							
2640	1.62	34.655	2.28	27.75							

21 CNAV OSHAWA; August 11, 1959; 2259 GCT; 54°59'N, 148°03'W; sounding, missing; wind, 140°, 32 kt; weather, overcast; sea, moderate.

0	11.70	32.732	6.40	24.91	0	11.70	32.73	6.40	24.91	305	0.00
8	12.38	32.701	6.31	24.75	10	12.37	32.70	6.28	24.76	320	0.03
16	12.34	32.697	6.22	24.76	20	12.05	32.74	6.26	24.85	311	0.06
24	11.80	(32.774)a)	6.31	(24.92)	30	9.24	32.82	6.68	25.40	259	0.09
42	5.10	32.897	7.28	26.02	50	4.74	32.92	7.22	26.08	194	0.14
64	4.22	32.961	7.15	26.17	75	3.87	33.04	6.62	26.27	176	0.18
86	3.57	33.115	6.16	26.35	100	3.75	33.42	4.38	26.58	146	0.22
108	3.85	33.576	3.46	26.69	125	3.86	33.71	2.68	26.80	126	0.26
130	3.86	33.744	2.46	26.82	150	3.96	33.87	1.30	26.91	115	0.29
151	3.96	33.876	1.24	26.92	175	3.85	33.94	0.92	26.98	109	0.32
173	3.85	33.933	0.95	26.98	200	3.87	33.99	0.73	27.02	105	0.35
194	3.87	33.959	0.63	26.99	250	3.89	34.15	1.34	27.14	93	0.40
216	3.86	34.061	0.97	27.08	300	3.84	34.19	1.13	27.18	90	0.44
260	3.90	34.173	1.44	27.16	400	3.72	34.23	0.54	27.23	85	0.54
391	3.74	34.229	0.54	27.22	500	3.53	34.28	0.50	27.29	79	0.62
490	3.55	34.275	0.52	27.28	600	3.37	34.36	0.37	27.37	72	0.70
589	3.39	(34.357)a)	0.37	(27.36)	700	3.19	34.43	0.43	27.43	66	0.78
688	3.21	34.426	0.41	27.43	800	3.01	34.44	0.47	27.46	63	0.85
786	3.04	34.431	0.46	27.45	1000	2.70	34.51	0.55	27.54	56	0.98
984	2.72	34.503	0.54	27.54	1200	2.43	34.56	0.74	27.61	49	1.10
1281	2.34	34.582	0.81	27.63	1500	2.15	34.59	0.96	27.65	45	1.26
1577	2.09	34.595	1.02	27.66	2000	1.85	34.61	1.51	27.69	41	1.52
2071	1.81	34.614	1.58	27.70							
2076	1.82	34.615	1.60	27.70							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 12, 1959; 0442 GCT; 55°40'N, 149°00'W; sounding, missing; wind, 130°, 35 kt; weather, moderate rain; sea, very rough. 22

0	12.30	32.717	5.94	24.78	0	12.30	32.72	5.94	24.78	318	0.00
9	12.52	32.748	6.25	24.76	10	12.51	32.75	6.25	24.77	319	0.03
19	12.42	32.741	6.29	24.78	20	12.40	32.74	6.29	24.78	318	0.06
28	12.26	32.744	6.33	24.81	30	11.49	32.76	6.41	24.97	300	0.10
47	6.14	32.896	6.94	25.90	50	5.87	32.90	6.97	25.94	207	0.15
72	4.22	32.963	7.12	26.17	75	4.14	32.98	7.03	26.19	184	0.20
96	3.66	33.066	6.46	26.31	100	3.66	33.14	6.06	26.36	167	0.24
121	3.66	33.485	4.16	26.64	125	3.70	33.53	3.82	26.67	138	0.28
145	3.89	33.727	2.25	26.81	150	3.91	33.76	2.00	26.83	123	0.31
169	4.00	33.880	1.11	26.92	175	3.99	33.89	1.03	26.93	113	0.34
193	3.98	33.934	0.80	26.96	200	3.97	33.95	0.80	26.97	110	0.37
217	3.94	33.972	0.81	27.00	250	3.88	34.00	0.91	27.02	105	0.42
241	3.89	33.983	0.77	27.01							
290	3.85	34.055	1.44	27.07							

CNAV OSHAWA; August 15, 1959; 0252 GCT; 57°10'N, 151°15'W; sounding, missing; wind, 090°, 18 kt; weather, overcast; sea, moderate. 23

0	12.20	32.161	6.40	24.37	0	12.20	32.16	6.40	24.37	357	0.00
10	12.30	32.158	6.44	24.35	10	12.30	32.16	6.44	24.35	359	0.04
20	12.18	32.153	6.40	24.37	20	12.18	32.15	6.40	24.37	357	0.07
30	10.27	32.294	6.40	24.82	30	10.27	32.29	6.40	24.82	314	0.11
50	6.17	32.547	6.12	25.62	50	6.17	32.55	6.12	25.62	238	0.16
75	5.62	32.757	5.52	25.85	75	5.62	32.76	5.52	25.85	216	0.22
100	5.50	32.937	5.11	26.01	100	5.50	32.94	5.11	26.01	201	0.27

CNAV OSHAWA; August 15, 1959; 0436 GCT; 57°00'N, 151°00'W; sounding, missing; wind, 090°, 20 kt; weather, intermittent moderate rain; sea, moderate. 24

0	12.40	32.508	6.32	24.60	0	12.40	32.51	6.32	24.60	335	0.00
10	12.54	32.502	6.29	24.57	10	12.54	32.50	6.29	24.57	338	0.03
19	12.46	32.499	6.33	24.58	20	11.86	32.48	6.35	24.68	327	0.07
29	7.19	32.362	6.52	25.34	30	7.12	32.37	6.51	25.36	262	0.10
49	5.99	32.507	6.36	25.61	50	5.97	32.52	6.36	25.62	238	0.15
73	5.61	32.674	6.31	25.79	75	5.57	32.68	6.27	25.80	221	0.20
97	5.19	32.779	6.00	25.92	100	5.20	32.80	5.95	25.93	208	0.26
121	5.28	32.934	5.62	26.03	125	5.25	33.04	5.53	26.11	191	0.31
146	5.11	33.518	5.08	26.51	150	5.16	33.52	4.89	26.51	153	0.35
170	5.42	33.557	4.01	26.51	175	5.53	33.61	3.82	26.54	150	0.39
194	5.91	33.801	3.16	26.64	200	5.84	33.80	3.04	26.65	140	0.43
218	5.63	33.815	2.67	26.68	250	5.35	33.85	2.31	26.75	130	0.50
243	(5.41)a)	(33.845)a)	(2.39)a)	(26.73)	300	4.99	33.90	1.84	26.83	123	0.56
291	(5.05)a)	(33.896)a)	(1.92)a)	(26.82)	400	4.43	33.99	1.21	26.96	110	0.68
366	4.58	33.961	1.32	26.92	500	4.08	34.08	1.01	27.07	100	0.80
458	4.19	34.043	1.03	27.03	600	3.84	34.16	0.75	27.16	92	0.90
550	3.97	34.126	0.97	27.12	700	3.60	34.23	0.49	27.24	84	0.99
642	3.73	34.194	0.58	27.19							
735	3.53	34.256	0.45	27.26							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
25	CNAV OSHAWA; August 15, 1959; 0737 GCT; 56°47'N, 150°39'W; sounding, missing; wind, 090°, 15 kt; weather, intermittent moderate rain; sea, moderate.										
0	12.10	32.457	5.88	24.62	0	12.10	32.46	5.88	24.62	333	0.00
10	12.48	32.475	5.86	24.56	10	12.48	32.48	5.86	24.56	339	0.03
19	12.42	32.481	5.44	24.58	20	12.32	32.48	5.48	24.60	335	0.07
29	11.52	32.473	5.76	24.74	30	11.20	32.48	5.77	24.80	316	0.10
48	6.47	32.588	5.88	25.61	50	6.38	32.60	5.88	25.63	237	0.16
73	5.50	32.712	5.89	25.83	75	5.47	32.72	5.92	25.84	217	0.21
97	5.22	32.830	6.24	25.95	100	5.19	32.87	6.13	25.99	202	0.27
122	4.98	33.127	5.35	26.22	125	5.03	33.18	5.17	26.25	178	0.31
146	5.38	33.494	4.00	26.46	150	5.40	33.53	3.91	26.49	155	0.36
171	5.49	33.725	3.47	26.63	175	5.40	33.73	3.38	26.64	141	0.39
195	4.95	33.747	2.93	26.71	200	4.91	33.76	2.89	26.73	132	0.43
220	4.77	33.812	2.73	26.78	250	4.63	33.81	2.05	26.79	127	0.50
244	4.63	33.789	2.12	26.78	300	4.61	33.94	1.53	26.91	115	0.56
293	4.64	33.937	1.59	26.90	400	4.22	34.04	0.86	27.02	105	0.67
391	4.24	34.036	0.88	27.02	500	3.97	34.10	0.63	27.09	98	0.78
491	3.99	34.091	0.64	27.09	600	3.80	34.17	0.55	27.17	91	0.88
591	3.82	34.164	0.56	27.16	700	3.62	34.24	0.45	27.24	84	0.97
691	3.64	34.231	0.45	27.23	800	3.41	34.28	0.41	27.29	79	1.06
791	3.43	34.273	0.41	27.29	1000	3.02	34.37	0.44	27.40	69	1.22
991	3.04	34.363	0.43	27.40	1200	2.72	34.43	0.58	27.48	61	1.37
1291	2.60	34.460	0.65	27.51	1500	2.34	34.50	0.77	27.57	53	1.56
1590	2.24	34.517	0.82	27.59	2000	1.94	34.58	1.39	27.66	44	1.85
2090	1.88	34.587	1.50	27.67							
2095	1.88	34.606	1.43	27.69							
26	CNAV OSHAWA; August 15, 1959; 1227 GCT; 56°20'N, 150°00'W; sounding, missing; wind, 320°, 10 kt; weather, overcast; sea, moderate.										
0	12.40	32.514	6.20	24.61	0	12.40	32.51	6.20	24.61	334	0.00
9	12.44	32.490	6.24	24.58	10	12.43	32.49	6.23	24.58	337	0.03
18	12.40	32.498	6.16	24.59	20	12.40	32.50	6.16	24.59	336	0.07
28	12.42	32.487	6.16	24.58	30	11.91	32.51	6.26	24.69	326	0.10
47	(8.36)a)	32.648	6.99	(25.40)	50	7.85	32.66	6.92	25.48	251	0.16
71	4.85	32.745	6.56	25.93	75	4.81	32.78	6.50	25.96	205	0.22
96	4.64	32.969	6.17	26.13	100	4.74	33.06	5.81	26.19	184	0.27
120	5.18	33.453	4.19	26.45	125	5.20	33.50	4.00	26.49	155	0.31
144	5.29	33.662	3.35	26.60	150	5.23	33.69	3.23	26.63	142	0.35
168	5.06	33.773	2.89	26.72	175	4.97	33.80	2.68	26.75	130	0.38
192	4.78	33.861	2.20	26.82	200	4.74	33.88	2.07	26.84	122	0.41
216	4.66	33.927	1.83	26.89	250	4.55	33.94	1.51	26.91	115	0.47
240	4.59	33.933	1.59	26.90	300	4.36	34.00	1.15	26.97	110	0.53
289	4.40	33.986	1.21	26.96	400	4.06	34.10	0.71	27.08	99	0.64
394	4.07	34.093	0.72	27.08	500	3.86	34.16	0.58	27.15	92	0.74
492	3.88	34.152	0.58	27.15	600	3.65	34.22	0.53	27.22	86	0.84
589	3.67	34.207	0.53	27.21	700	3.46	34.28	0.48	27.29	79	0.92
687	3.49	34.275	0.48	27.28	800	3.26	34.31	0.48	27.33	75	1.01
785	3.29	34.305	0.48	27.33	1000	2.88	34.38	0.53	27.43	66	1.16
981	2.91	34.381	0.53	27.42	1200	2.61	34.42	0.55	27.48	61	1.30
1276	2.52	34.437	0.55	27.50	1500	2.29	34.50	0.77	27.57	53	1.50
1572	2.22	34.525	0.84	27.60	2000	1.92	34.60	1.42	27.68	42	1.78
1577	2.19	34.533	0.93	27.60	2500	1.70	34.63	2.03	27.72	38	2.03
2063	1.88	34.611	1.49	27.69	3000	1.57	34.66	2.46	27.75	36	2.27
2558	1.68	34.631	2.09	27.72	3500	1.51	34.67	2.83	27.76	35	2.50
3053	1.56	34.663	2.51	27.76							
3548	1.50	34.667	2.87	27.76							
3647	1.49	34.671	2.89	27.77							
3652	1.50	34.683	3.01	27.78							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

27

CNAV OSHAWA; August 15, 1959; 2250 GCT; 55°32'N, 151°59'W; sounding, missing; wind, 320°, 10 kt; weather, partly cloudy; sea, slight.

0	11.90	32.726	6.16	24.86	0	11.90	32.73	6.16	24.86	310	0.00
10	11.84	32.701	6.13	24.86	10	11.84	32.70	6.13	24.86	310	0.03
19	11.64	32.712	6.10	24.90	20	11.63	32.71	6.10	24.90	306	0.06
29	11.56	32.700	6.13	24.91	30	11.11	32.71	6.18	25.00	297	0.09
48	4.47	32.890	7.08	26.08	50	4.39	32.91	6.97	26.11	191	0.14
73	3.66	33.090	5.91	26.32	75	3.68	33.13	5.63	26.36	167	0.19
97	3.90	33.564	2.96	26.68	100	3.92	33.60	2.79	26.70	135	0.22
122	4.02	33.826	1.69	26.87	125	4.02	33.84	1.59	26.88	118	0.26
146	4.01	33.927	0.93	26.95	150	4.01	33.93	0.91	26.96	110	0.29
170	4.00	33.947	0.78	26.97	175	3.99	33.96	0.75	26.98	109	0.31
195	3.96	33.988	0.64	27.01	200	3.95	34.00	0.60	27.02	105	0.34
220	3.92	34.033	0.47	27.05	250	3.91	34.01	0.48	27.03	104	0.40
244	3.92	33.997	0.49	27.02	300	3.86	34.10	0.44	27.11	96	0.45
293	3.87	34.092	0.44	27.10	400	3.70	34.18	0.37	27.18	90	0.54
390	3.72	34.171	0.37	27.18	500	3.49	34.23	0.37	27.25	83	0.63
489	3.51	34.225	0.37	27.24	600	3.32	34.29	0.37	27.31	77	0.72
589	3.34	34.280	0.36	27.30	700	3.16	34.34	0.46	27.36	73	0.80
688	3.19	34.335	0.46	27.36	800	2.97	34.37	0.45	27.41	68	0.88
787	2.99	34.364	0.44	27.40	1000	2.67	34.44	0.55	27.49	60	1.02
986	2.69	34.431	0.54	27.48	1200	2.43	34.49	0.65	27.55	55	1.15
1185	2.45	34.490	0.64	27.55	1500	2.13	34.54	0.93	27.62	48	1.32
1484	2.16	34.541	0.86	27.61	2000	1.87	34.62	1.39	27.70	40	1.59
1489	2.14	34.540	0.92	27.61	2500	1.66	34.64	2.00	27.73	38	1.83
1981	1.88	34.620	1.37	27.70	3000	1.56	34.66	2.49	27.76	35	2.06
2478	1.67	34.641	1.98	27.73	3500	1.49	34.67	2.82	27.77	34	2.29
2976	1.56	34.665	2.46	27.76							
3473	1.49	(34.674)a)	2.82	(27.77)							
3672	1.48	34.677	2.84	27.77							
3677	1.49	34.689	2.99	27.78							

28

CNAV OSHAWA; August 16, 1959; 0600 GCT; 54°30'N, 152°00'W; sounding, missing; wind, 270°, 20 kt; weather, partly cloudy; sea, moderate.

0	12.10	32.734	6.23	24.83	0	12.10	32.73	6.23	24.83	313	0.00
9	12.08	32.719	6.20	24.83	10	12.07	32.72	6.20	24.83	313	0.03
19	(12.00)b)	32.710	6.16	(24.83)	20	11.97	32.71	6.15	24.84	312	0.06
28	11.78	32.692	6.12	24.86	30	11.27	32.71	6.22	24.97	300	0.09
47	(7.76)a)	32.868	6.89	(25.66)	50	7.25	32.88	6.88	25.74	226	0.15
71	4.28	32.942	6.83	26.15	75	4.19	32.97	6.68	26.18	184	0.20
95	3.82	33.109	6.01	26.32	100	3.82	33.19	5.57	26.39	164	0.24
118	3.81	33.437	4.10	26.59	125	3.88	33.53	3.15	26.66	139	0.28
142	4.04	33.751	1.03	26.81	150	4.03	33.81	1.02	26.86	120	0.31
166	4.01	33.914	0.99	26.94	175	3.97	33.93	0.90	26.96	110	0.34
190	3.90	33.962	0.75	26.99	200	3.89	33.97	0.71	27.00	107	0.37
214	3.87	33.989	0.65	27.02	250	3.86	34.03	0.62	27.05	102	0.42
237	3.88	34.016	0.63	27.04	300	3.79	34.09	0.55	27.10	97	0.48
285	3.80	34.074	0.57	27.09	400	3.71	34.17	0.46	27.18	90	0.57
375	3.75	34.146	0.44	27.15	500	3.54	34.24	0.57	27.25	83	0.66
468	3.60	34.220	0.50	27.23	600	3.35	34.29	0.59	27.31	77	0.75
562	3.42	34.275	0.68	27.29	700	3.15	34.33	0.52	27.36	73	0.83
656	3.25	34.311	0.46	27.33	800	2.97	34.37	0.65	27.41	68	0.91
751	3.05	34.355	0.58	27.39	1000	2.70	34.44	0.90	27.49	60	1.05
944	2.77	34.421	0.83	27.47							
1000	(2.70)c)	(34.438)c)	(0.90)c)	(27.49)							

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.
c) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
29	CNAV OSHAWA; August 16, 1959; 1220 GCT; 53°32'N, 151°57'W; sounding, missing; wind, 270°, 15 kt; weather, overcast; sea, moderate.										
0	11.20	32.767	6.25	25.02	0	11.20	32.77	6.25	25.02	295	0.00
10	11.38	32.731	6.17	24.96	10	11.38	32.73	6.17	24.96	300	0.03
20	11.34	(32.749)a)	6.19	(24.98)	20	11.34	32.75	6.19	24.98	299	0.06
30	9.88	32.761	6.44	25.25	30	9.88	32.76	6.44	25.25	273	0.09
50	4.89	32.948	7.07	26.08	50	4.89	32.95	7.07	26.08	194	0.14
75	3.45	33.028	6.70	26.29	75	3.45	33.03	6.70	26.29	174	0.18
100	3.62	33.202	5.60	26.42	100	3.62	33.20	5.60	26.42	162	0.22
125	3.81	33.577	3.07	26.70	125	3.81	33.58	3.07	26.70	135	0.26
150	3.96	(33.765)a)	1.32	(26.83)	150	3.96	33.76	1.32	26.83	123	0.30
175	3.96	33.925	0.96	26.96	175	3.96	33.92	0.96	26.96	110	0.32
200	3.91	(33.972)a)	0.57	(27.00)	200	3.91	33.97	0.57	27.00	107	0.35
225	3.88	34.013	0.47	27.04	250	3.88	34.01	0.41	27.03	104	0.41
250	3.88	34.008	0.41	27.03	300	3.84	34.08	0.31	27.10	97	0.46
300	3.84	34.083	0.31	27.10	400	3.73	34.16	0.43	27.17	91	0.56
386	3.76	34.153	0.41	27.16	500	3.51	34.24	0.46	27.25	83	0.65
483	3.54	34.229	0.47	27.24	600	3.32	34.29	0.43	27.31	77	0.73
579	3.36	34.275	0.43	27.30	700	3.15	34.34	0.44	27.36	73	0.81
676	3.18	34.327	0.43	27.35	800	3.01	34.37	0.49	27.40	69	0.89
772	3.06	34.357	0.48	27.39	1000	2.72	34.43	0.54	27.48	61	1.03
966	2.76	34.418	0.53	27.46	1200	2.50	34.48	0.62	27.54	56	1.16
1256	2.44	34.491	0.64	27.55							
30	CNAV OSHAWA; August 16, 1959; 1820 GCT; 52°30'N, 152°00'W; sounding, missing; wind, 280°, 20 kt; weather, overcast; sea, rough.										
0	10.80	32.681	5.95	25.03	0	10.80	32.68	5.95	25.03	294	0.00
10	(10.81)a)	32.681	6.74	(25.03)	10	10.81	32.68	6.74	25.03	294	0.03
19	10.82	32.675	6.08	25.02	20	10.82	32.68	6.12	25.02	295	0.06
29	10.80	32.671	6.35	25.02	30	10.41	32.69	6.37	25.10	287	0.09
48	4.64	32.899	6.62	26.07	50	4.53	32.91	6.56	26.10	192	0.14
72	3.50	33.038	5.99	26.30	75	3.57	33.08	5.78	26.33	170	0.18
97	4.00	33.369	4.45	26.51	100	4.03	33.41	4.21	26.54	150	0.22
121	4.24	33.679	2.72	26.73	125	4.28	33.71	2.56	26.75	130	0.26
145	4.44	33.845	1.87	26.84	150	4.38	33.86	1.75	26.86	120	0.29
169	4.16	33.897	1.32	26.92	175	4.14	33.91	1.24	26.93	113	0.32
193	4.09	33.950	1.04	26.96	200	4.08	33.96	1.01	26.98	109	0.35
218	4.06	33.995	0.92	27.00	250	3.99	34.02	0.62	27.03	101	0.40
242	4.02	34.008	0.63	27.02	300	3.84	34.07	0.55	27.09	98	0.46
290	3.85	34.061	0.56	27.08	400	3.73	34.18	0.50	27.18	90	0.55
392	3.75	34.172	0.50	27.18	500	3.55	34.23	0.49	27.24	84	0.64
491	3.57	34.227	0.49	27.24	600	3.38	34.28	0.47	27.30	78	0.73
589	3.40	34.276	0.46	27.29	700	3.19	34.33	0.55	27.36	73	0.81
688	3.21	34.329	0.55	27.35	800	3.02	34.37	0.52	27.40	69	0.89
787	3.04	34.365	0.52	27.40	1000	2.69	34.43	0.57	27.48	61	1.03
984	2.71	34.427	0.57	27.48	1200	2.50	34.48	0.64	27.53	56	1.16
1280	2.43	34.495	0.66	27.55	1500	2.29	34.52	0.78	27.59	51	1.35
1576	2.24	34.530	0.83	27.60	2000	1.90	34.61	2.07	27.69	41	1.62
1581	2.22	34.533	0.84	27.60	2500	1.69	34.65	1.44	27.74	37	1.86
2004	1.90	34.615	2.08	27.69	3000	1.56	34.67	2.58	27.76	35	2.10
2502	1.69	34.649	1.44	27.74	3500	1.50	34.69	2.82	27.78	33	2.32
3001	1.56	34.669	2.58	27.76							
3500	1.50	34.689	2.82	27.78							
3505	1.51	34.689	2.84	27.78							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

31

CNAV OSHAWA; August 17, 1959; 0245 GCT; 51°40'N, 153°00'W; sounding, missing; wind, 270°, 15 kt; weather, overcast; sea, moderate.

0	10.70	32.741	6.05	25.09	0	10.70	32.74	6.05	25.09	288	0.00
10	10.61	32.732	6.26	25.10	10	10.61	32.73	6.26	25.10	287	0.03
20	10.55	32.734	6.28	25.11	20	10.55	32.73	6.28	25.11	286	0.06
30	10.54	32.740	6.22	25.12	30	10.54	32.74	6.22	25.12	285	0.09
50	5.16	32.886	6.93	26.01	50	5.16	32.89	6.93	26.01	201	0.14
74	3.94	32.945	6.79	26.18	75	3.93	32.95	6.75	26.19	184	0.18
99	3.74	33.113	6.10	26.33	100	3.74	33.14	5.97	26.36	167	0.23
124	3.64	33.727	3.11	26.83	125	3.64	33.73	3.09	26.84	122	0.26
149	3.58	33.798	2.63	26.89	150	3.58	33.80	2.61	26.90	116	0.30
173	3.60	33.842	2.25	26.93	175	3.59	33.85	2.23	26.93	113	0.32
198	3.54	33.937	1.96	27.01	200	3.54	33.94	1.93	27.01	106	0.35
223	3.54	33.919	1.57	26.99	250	3.58	33.95	1.13	27.01	106	0.41
248	3.58	33.944	1.13	27.01	300	3.60	34.01	1.10	27.06	101	0.46
297	3.60	34.009	1.11	27.06	400	3.61	34.12	0.83	27.14	93	0.56
397	3.61	34.112	0.83	27.14	500	3.50	34.21	0.75	27.23	85	0.65
497	3.50	34.209	0.75	27.23	600	3.34	34.27	0.64	27.30	78	0.74
597	3.35	34.273	0.64	27.29	700	3.15	34.32	0.58	27.35	74	0.82
696	3.16	34.318	0.58	27.35	800	2.98	34.36	0.54	27.40	69	0.90
796	2.99	34.359	0.54	27.40	1000	2.72	34.42	0.76	27.47	62	1.04
995	2.73	34.423	0.76	27.47	1200	2.50	34.48	0.83	27.53	56	1.18
1295	2.40	34.499	0.85	27.56	1500	2.23	34.54	0.84	27.60	50	1.36
1594	2.16	34.550	0.83	27.62	2000	1.94	34.60	1.60	27.68	42	1.63
2093	1.89	34.614	1.76	27.69							
2098	1.90	34.618	1.84	27.70							

32

CNAV OSHAWA; August 17, 1959; 0920 GCT; 50°40'N, 154°00'W; sounding, missing; wind, 260°, 15 kt; weather, intermittent slight drizzle; sea, moderate.

0	10.40	32.732	6.08	25.14	0	10.40	32.73	6.08	25.14	283	0.00
10	10.44	32.726	6.35	25.13	10	10.44	32.73	6.35	25.13	284	0.03
20	10.35	32.730	6.32	25.14	20	10.35	32.73	6.32	25.14	283	0.06
29	10.29	32.736	6.32	25.16	30	10.02	32.74	6.34	25.21	277	0.08
49	5.88	(32.832)a)	6.76	(25.88)	50	5.80	32.84	6.76	25.89	212	0.14
74	4.20	32.914	6.72	26.13	75	4.22	32.93	6.63	26.14	188	0.18
98	4.60	33.262	4.73	26.37	100	4.66	33.30	4.50	26.39	164	0.23
123	5.32	33.737	2.20	26.66	125	5.33	33.75	2.14	26.67	138	0.27
147	5.38	33.841	1.61	26.73	150	5.36	33.84	1.60	26.74	131	0.30
172	5.19	33.868	1.56	26.78	175	5.14	33.87	1.57	26.79	127	0.34
197	4.81	33.887	1.61	26.84	200	4.77	33.89	1.61	26.84	122	0.37
221	4.53	33.886	1.61	26.87	250	4.17	33.91	1.71	26.93	113	0.43
244	4.18	33.897	1.79	26.91	300	4.07	34.01	1.19	27.02	105	0.48
295	4.08	34.008	1.22	27.01	400	3.84	34.10	0.73	27.11	96	0.59
389	3.85	34.094	0.73	27.10	500	3.70	34.17	0.75	27.18	90	0.69
486	3.73	34.159	0.75	27.17	600	3.49	34.23	0.72	27.25	83	0.78
583	3.52	34.219	0.74	27.24	700	3.30	34.29	0.63	27.31	77	0.86
680	3.34	34.283	0.63	27.30	800	3.11	34.33	0.63	27.37	72	0.94
778	3.15	34.324	0.64	27.35	1000	2.79	34.41	0.57	27.45	64	1.09
972	2.83	34.399	0.56	27.44	1200	2.53	34.47	0.63	27.53	56	1.23
1264	2.45	34.490	0.64	27.55	1500	2.26	34.53	0.91	27.60	50	1.41
2041	1.92	34.602	1.39	27.68	2000	1.94	34.60	1.36	27.68	42	1.69
2046	1.92	34.636	1.34	27.71							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
33	CNAV OSHAWA; August 17, 1959; 1630 GCT; 50°00'N, 155°00'W; sounding, missing; wind, 220°, 15 kt; weather, overcast; sea, moderate.										
0	10.30	32.722	6.31	25.15	0	10.30	32.72	6.31	25.15	282	0.00
10	10.19	32.716	6.35	25.16	10	10.19	32.72	6.35	25.16	281	0.03
20	10.09	32.716	6.34	25.18	20	10.09	32.72	6.34	25.18	280	0.06
30	10.00	32.806	6.27	25.26	30	10.00	32.81	6.27	25.26	272	0.08
49	6.68	32.902	6.83	25.83	50	6.55	32.90	6.83	25.85	216	0.13
74	4.01	32.962	6.87	26.19	75	3.99	32.99	6.85	26.21	182	0.18
99	3.51	33.490	6.69	26.66	100	3.51	33.50	6.56	26.67	138	0.22
124	3.58	33.782	3.83	26.88	125	3.58	33.78	3.77	26.88	118	0.26
149	3.57	33.850	2.49	26.94	150	3.57	33.85	2.48	26.94	112	0.29
173	3.58	33.876	2.14	26.96	175	3.57	33.88	2.12	26.96	110	0.31
198	3.50	(33.901)a)	1.93	(26.98)	200	3.50	33.90	1.89	26.99	108	0.34
223	3.52	33.924	1.57	27.00	250	3.55	33.95	1.36	27.02	105	0.40
247	3.55	33.946	(1.38)a)	27.02	300	3.56	34.03	1.03	27.08	99	0.45
297	3.56	34.022	1.03	27.07	400	3.56	34.13	0.93	27.16	92	0.55
392	3.57	34.126	0.95	27.16	500	3.42	34.22	0.75	27.25	83	0.64
491	3.43	34.216	0.73	27.24	600	3.27	34.29	0.94	27.32	76	0.72
590	3.29	34.286	0.99	27.31	700	3.12	34.32	0.58	27.36	73	0.80
690	3.14	34.319	0.59	27.35	800	2.95	34.37	0.54	27.41	68	0.88
790	2.96	34.364	0.53	27.40	1000	2.70	34.43	0.72	27.48	61	1.02
989	2.71	34.423	0.69	27.47	1200	2.45	34.49	1.03	27.55	55	1.15
1289	2.36	34.514	1.15	27.58	1500	2.20	34.55	1.14	27.61	49	1.33
1588	2.14	34.560	1.13	27.63	2000	1.89	34.61	1.39	27.69	41	1.60
2088	1.84	34.615	1.43	27.70							
2093	1.84	34.619	1.46	27.70							
34	CNAV OSHAWA; August 18, 1959; 0210 GCT; 49°00'N, 157°19'W; sounding, missing; wind, 220°, 10 kt; weather, fog; sea, slight.										
0	11.10	32.706	5.34	24.99	0	11.10	32.71	5.34	24.99	298	0.00
10	10.51	32.676	6.51	25.07	10	10.51	32.68	6.51	25.07	290	0.03
20	10.18	32.678	6.44	25.13	20	10.18	32.68	6.44	25.13	284	0.06
29	9.75	32.692	6.47	25.21	30	9.52	32.70	6.51	25.26	272	0.09
49	5.93	32.852	7.02	25.89	50	5.88	32.86	7.02	25.90	211	0.14
73	4.84	32.914	6.92	26.06	75	4.76	32.92	6.92	26.07	195	0.19
98	3.97	32.924	6.87	26.16	100	3.97	32.95	6.81	26.18	184	0.23
122	3.96	33.162	6.24	26.35	125	3.94	33.22	5.98	26.40	164	0.28
147	3.78	33.610	4.28	26.73	150	3.77	33.63	4.19	26.74	131	0.32
171	3.72	33.731	3.61	26.83	175	3.76	33.74	3.51	26.83	123	0.35
195	3.93	(33.787)a)	3.06	(26.85)	200	3.85	33.80	3.01	26.87	119	0.38
220	3.54	33.838	2.82	26.93	250	3.54	33.88	2.41	26.97	110	0.44
244	3.54	33.872	2.50	26.96	300	3.52	33.95	1.77	27.02	105	0.49
293	3.51	33.942	1.83	27.02	400	3.60	34.08	1.13	27.12	95	0.60
374	3.61	34.049	1.24	27.09	500	3.54	34.18	0.83	27.20	88	0.69
468	3.58	34.152	0.85	27.18	600	3.40	34.24	0.86	27.27	81	0.78
562	3.47	34.218	0.80	27.24	700	3.23	34.30	0.82	27.33	75	0.87
655	3.31	34.276	0.96	27.30	800	3.05	34.36	0.69	27.39	70	0.94
750	3.14	34.336	0.67	27.36	1000	2.74	34.43	0.76	27.48	61	1.09
946	2.81	34.417	0.75	27.46	1200	2.50	34.48	0.81	27.54	56	1.22
1240	2.46	34.492	0.82	27.55	1500	2.23	34.54	1.06	27.60	50	1.40
1534	2.20	34.543	1.10	27.61	2000	1.90		1.46			1.85
2023	1.89	34.619	1.47	26.90							
2028	1.91	34.614	1.47	26.89							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

35

CNAV OSHAWA; August 18, 1959; 0756 GCT; 50°00'N, 157°22'W; sounding, missing; wind, 180°, 10 kt; weather, fog; sea, slight.

0	10.50	32.690	6.47	25.09	0	10.50	32.69	6.47	25.09	288	0.00
10	10.45	32.668	6.45	25.08	10	10.45	32.67	6.45	25.08	289	0.03
19	10.38	32.669	6.45	25.09	20	10.36	32.67	6.45	25.09	288	0.06
29	10.23	32.664	6.44	25.11	30	9.94	32.68	6.48	25.17	280	0.09
48	5.68	32.847	7.19	25.91	50	5.50	32.85	7.17	25.94	207	0.14
72	3.80	32.898	6.99	26.16	75	3.76	32.90	6.98	26.16	186	0.19
97	3.48	32.913	6.91	26.20	100	3.48	32.95	6.66	26.23	180	0.23
121	3.49	33.208	5.08	26.43	125	3.52	33.31	4.57	26.51	153	0.27
145	3.65	33.785	2.23	26.88	150	3.65	33.80	2.13	26.89	117	0.31
169	3.66	33.868	1.77	26.94	175	3.64	33.88	1.68	26.95	111	0.34
193	3.60	33.909	1.44	26.98	200	3.60	33.92	1.37	26.99	108	0.36
217	3.59	33.948	1.20	27.01	250	3.62	33.99	0.91	27.04	103	0.42
242	3.62	33.978	0.93	27.03	300	3.61	34.06	0.80	27.10	97	0.47
290	3.62	34.050	0.82	27.09	400	3.54	34.15	0.71	27.18	90	0.57
360	3.58	34.120	0.71	27.15	500	3.47	34.21	0.67	27.23	85	0.66
456	3.48	34.195	0.72	27.22	600	3.35	34.27	0.58	27.29	79	0.74
553	3.45	34.228	0.62	27.25	700	3.14	34.33	0.58	27.36	73	0.83
650	3.26	34.304	0.56	27.33	800	2.95	34.37	0.62	27.41	68	0.90
747	3.04	(34.351)a)	0.60	(27.39)	1000	2.65	34.44	0.71	27.50	60	1.04
941	2.73	34.429	0.66	27.48	1200	2.41	34.49	0.84	27.55	55	1.17
1231	2.38	(34.501)a)	0.86	(27.56)	1500	2.17	34.55	1.04	27.62	48	1.35
1522	2.15	34.558	1.05	27.63							

36

CNAV OSHAWA; August 18, 1959; 1454 GCT; 51°00'N, 157°26'W; sounding, missing; wind, direction missing, 10 kt; weather, fog; sea, slight.

0	10.80	32.709	6.53	25.05	0	10.80	32.71	6.53	25.05	292	0.00
9	10.60	32.752	6.44	25.12	10	10.59	32.75	6.45	25.12	285	0.03
18	10.50	32.756	6.51	25.14	20	10.50	32.75	6.48	25.14	283	0.06
27	(10.50)b)	32.747	6.41	(25.13)	30	9.30	32.79	6.50	25.36	262	0.08
46	4.10	32.956	6.89	26.17	50	3.98	32.97	6.89	26.20	183	0.13
69	3.48	33.022	6.88	26.29	75	3.51	33.10	6.34	26.35	168	0.17
91	3.58	33.291	5.06	26.49	100	3.64	33.48	3.96	26.63	142	0.21
114	3.72	33.735	2.42	26.83	125	3.71	33.80	2.02	26.89	117	0.25
137	3.70	33.872	1.61	26.94	150	3.71	33.90	1.42	26.96	110	0.28
160	3.72	33.911	1.28	26.97	175	3.67	33.95	1.08	27.01	106	0.30
183	3.65	33.970	0.97	27.02	200	3.66	33.98	0.93	27.03	104	0.33
206	3.67	33.984	0.91	27.03	250	3.68	34.04	0.64	27.08	99	0.38
229	3.68	34.016	0.72	27.06	300	3.67	34.09	0.54	27.12	95	0.43
274	3.68	34.072	0.55	27.10	400	3.59	34.16	0.52	27.18	90	0.53
352	3.65	34.122	0.53	27.15	500	3.46	34.23	0.48	27.25	83	0.62
440	3.54	(34.193)a)	0.50	(27.21)	600	3.27	34.29	0.52	27.32	76	0.70
528	3.42	34.252	0.47	27.27	700	3.07	34.35	0.58	27.38	71	0.78
615	3.24	34.300	0.53	27.33	800	2.92	34.38	0.60	27.42	67	0.86
703	3.06	34.350	0.58	27.38	1000	2.66	34.44	0.66	27.49	60	1.00
879	2.82	34.410	0.62	27.45	1200	2.44	34.49	0.75	27.55	55	1.12
1153	2.49	34.477	0.71	27.53	1500	2.18	34.55	1.02	27.62	48	1.30
1432	2.22	34.537	0.94	27.61	2000	1.92	34.61	1.53	27.68	42	1.57
1915	1.96	34.597	1.46	27.67							
2000	(1.92)c)	(34.606)c)	(1.53)c)	(27.68)							

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.
c) Value extrapolated by two-point logarithmic method.

37 CNAV OSHAWA; August 18, 1959; 2130 GCT; 52°00'N, 157°40'W; sounding, missing; wind, 190°, 20 kt; weather, fog; sea, moderate.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
0	10.00	32.540	6.47	25.05	0	10.00	32.54	6.47	25.05	292	0.00
10	9.52	32.534	6.47	25.13	10	9.52	32.53	6.47	25.13	284	0.03
20	9.44	32.549	6.47	25.15	20	9.44	32.55	6.47	25.15	282	0.06
30	8.50	32.601	6.23	25.34	30	8.50	32.60	6.23	25.34	264	0.08
50	4.38	32.880	5.62	26.09	50	4.38	32.88	5.62	26.09	193	0.13
75	4.18	33.062	5.39	26.25	75	4.18	33.06	5.39	26.25	178	0.18
100	4.80	33.330	4.16	26.40	100	4.80	33.33	4.16	26.40	164	0.22
125	4.40	33.634	2.87	26.68	125	4.40	33.63	2.87	26.68	137	0.26
149	5.36	33.760	2.55	26.67	150	5.35	33.76	2.54	26.68	137	0.29
174	5.10	33.846	2.21	26.77	175	5.09	33.85	2.20	26.77	128	0.33
199	4.76	33.888	1.94	26.84	200	4.75	33.89	1.93	26.85	121	0.36
224	4.59	33.932	1.55	26.90	250	4.42	33.97	1.25	26.95	111	0.42
249	4.42	33.969	1.27	26.94	300	4.23	34.02	0.95	27.00	107	0.48
299	4.23	34.016	0.95	27.00	400	3.96	34.09	0.59	27.09	98	0.58
389	3.98	34.083	0.62	27.08	500	3.75	34.17	0.52	27.17	91	0.68
486	3.78	34.160	0.46	27.16	600	3.54	34.23	0.77	27.24	84	0.77
583	3.58	34.225	0.84	27.23	700	3.33	34.28	0.46	27.30	78	0.86
680	3.38	34.262	0.47	27.28	800	3.13	34.33	0.44	27.36	73	0.94
777	3.17	34.320	0.43	27.35	1000	2.82	34.41	0.56	27.45	64	1.09
971	2.86	34.397	0.55	27.44	1200	2.58	34.46	0.66	27.51	58	1.13
1263	2.51	34.477	0.68	27.53	1500	2.29	34.53	0.83	27.59	51	1.42
1554	2.24	34.540	0.86	27.61	2000	1.93	34.60	1.43	27.68	42	1.69
2040	1.91	34.605	1.48	27.68							
2045	1.91	34.626	1.50	27.70							

38 CNAV OSHAWA; August 19, 1959; 0320 GCT; 53°00'N, 157°47'W; sounding, missing; wind, 240°, 15 kt; weather, light fog; sea, moderate.

0	11.30	32.554	6.19	24.84	0	11.30	32.55	6.19	24.84	312	0.00
9	10.97	32.548	6.50	24.90	10	10.96	32.55	6.47	24.90	306	0.03
18	10.86	32.542	6.29	24.91	20	10.84	32.55	6.29	24.92	304	0.06
27	10.79	32.566	6.28	24.94	30	10.11	32.60	6.27	25.08	289	0.09
45	(7.35)a)	32.736	6.22	(25.61)	50	6.59	32.80	6.24	25.76	224	0.14
68	4.31	32.978	6.29	26.17	75	4.21	33.04	6.08	26.23	180	0.20
90	4.02	33.146	5.68	26.33	100	4.08	33.29	4.97	26.44	160	0.24
112	4.14	33.450	4.21	26.56	125	4.18	33.60	3.30	26.68	137	0.28
135	4.20	33.707	2.67	26.76	150	4.19	33.75	2.24	26.80	126	0.31
158	4.18	33.778	2.03	26.82	175	4.02	33.86	1.46	26.90	116	0.34
180	3.98	(33.884)a)	1.30	(26.92)	200	3.89	33.97	1.01	27.00	107	0.37
202	3.88	33.979	0.99	27.01	250	3.80	34.00	0.77	27.04	103	0.42
225	3.81	33.988	0.85	27.02	300	3.77	34.05	0.68	27.08	99	0.47
270	3.79	34.018	0.72	27.05	400	3.70	34.14	0.62	27.16	92	0.57
393	3.71	34.135	0.62	27.15	500	3.54	34.21	0.60	27.23	85	0.67
492	3.55	34.209	0.57	27.22	600	3.41	34.27	0.85	27.29	79	0.75
590	3.43	34.264	0.90	27.28	700	3.20	34.33	0.53	27.36	73	0.84
689	3.22	34.327	0.49	27.35	800	3.01	34.37	0.76	27.41	68	0.91
788	3.03	34.369	0.76	27.40	1000	2.69	34.44	0.71	27.49	60	1.05
986	2.71	34.437	0.71	27.48	1200	2.43	34.51	0.76	27.56	54	1.18
1283	2.33	34.531	0.78	27.59	1500	2.07	34.57	1.28	27.64	46	1.35
1465	2.09	34.568	1.24	27.64	2000	1.84	34.62	1.74	27.70	40	1.61
1964	(1.85)a)	(34.613)a)	(1.71)a)	(27.69)	2500	1.66	34.65	2.12	27.74	37	1.85
2463	1.67	34.648	2.07	27.74	3000	1.55	34.67	2.63	27.76	35	2.08
2962	1.55	34.670	2.61	27.76							
3461	1.50	34.688	2.84	27.78							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 19, 1959; 1045 GCT; 54°00'N, 157°53'W; sounding, missing; wind, 220°, 15 kt; weather, overcast; sea, slight. 39

0	10.90	32.696	6.33	25.02	0	10.90	32.70	6.33	25.02	295	0.00
10	11.28	32.649	6.35	24.92	10	11.28	32.65	6.35	24.92	304	0.03
19	11.26	32.661	6.19	24.93	20	11.22	32.66	6.20	24.94	302	0.06
29	10.92	32.669	6.29	25.00	30	10.52	32.68	6.34	25.08	289	0.09
48	4.64	32.902	6.93	26.08	50	4.56	32.91	6.90	26.09	193	0.14
72	3.80	33.007	6.55	26.24	75	3.80	33.05	6.31	26.28	175	0.19
96	3.83	33.320	4.79	26.49	100	3.87	33.38	4.51	26.53	151	0.23
120	4.04	33.624	3.24	26.71	125	4.05	33.67	3.01	26.75	130	0.26
144	4.07	33.844	2.24	26.88	150	4.06	33.85	2.04	26.89	117	0.29
168	4.04	33.875	1.48	26.91	175	4.04	33.90	1.42	26.93	113	0.32
192	4.04	33.960	1.28	26.98	200	4.03	33.97	1.10	26.99	108	0.35
216	4.00	33.994	0.77	27.01	250	3.96	34.02	0.57	27.03	104	0.41
240	3.97	34.008	0.58	27.02	300	3.91	34.07	0.52	27.08	99	0.46
288	3.93	34.060	0.53	27.07	400	3.76	34.14	0.41	27.15	92	0.56
374	3.81	34.116	0.43	27.12	500	3.58	34.21	0.35	27.22	86	0.65
468	3.65	34.189	0.39	27.20	600	3.38	34.27	0.32	27.29	79	0.74
562	3.46	34.250	0.28	27.27	700	3.18	34.32	0.38	27.35	74	0.82
660	3.26	34.301	0.38	27.33	800	3.01	34.36	0.41	27.39	70	0.90
760	3.08	34.340	0.38	27.37	1000	2.71	34.42	0.57	27.47	62	1.04
958	2.77	34.410	0.55	27.46	1200	2.44	34.48	0.67	27.55	55	1.17
1257	2.37	34.501	0.69	27.56	1500	2.13	34.55	1.03	27.63	47	1.35
1556	2.08	34.564	1.10	27.64	2000	1.83	34.62	1.68	27.70	40	1.61
2074	1.79	34.627	(1.77)a)	27.71							
2079	1.78	34.625	1.77	27.71							

CNAV OSHAWA; August 19, 1959; 1937 GCT; 54°00'N, 155°00'W; sounding, missing; wind, 270°, 10 kt; weather, cloudy; sea, slight. 40

0	11.60	32.653	6.35	24.86	0	11.60	32.65	6.35	24.86	310	0.00
9	11.37	32.624	5.56	24.88	10	11.36	32.62	5.66	24.88	308	0.03
18	11.33	32.624	6.28	24.89	20	11.31	32.62	6.26	24.89	307	0.06
27	11.24	32.628	6.18	24.91	30	10.01	32.64	6.22	25.13	284	0.09
45	(5.00)b)	32.682	6.36	(25.86)	50	4.77	32.75	6.40	25.94	207	0.14
67	4.10	32.950	6.47	26.17	75	4.19	33.08	5.89	26.26	177	0.19
89	4.33	33.270	5.00	26.40	100	4.71	33.43	3.81	26.49	155	0.23
111	5.05	(33.577)a)	2.73	(26.56)	125	4.91	33.74	2.42	26.71	134	0.27
134	4.83	33.843	2.23	26.80	150	4.65	33.89	1.89	26.85	121	0.30
156	4.59	33.902	1.78	26.87	175	4.30	33.94	1.37	26.93	113	0.33
178	4.26	33.944	1.31	26.94	200	4.14	33.97	1.02	26.98	109	0.36
201	4.13	33.975	1.01	26.98	250	4.03	34.04	0.78	27.04	103	0.41
223	4.08	34.011	0.93	27.01	300	3.96	34.07	0.57	27.07	100	0.47
267	4.00	34.055	0.69	27.06	400	3.77	34.15	0.49	27.16	92	0.56
314	3.94	34.076	0.53	27.08	500	3.57	34.22	0.49	27.23	85	0.66
400	3.77	34.150	0.49	27.16	600	3.37	34.28	0.50	27.30	78	0.74
486	3.60	34.215	0.49	27.22	700	3.16	34.32	0.55	27.35	74	0.83
572	3.43	34.262	0.49	27.28	800	2.99	34.36	0.57	27.39	70	0.90
658	3.24	34.310	0.54	27.33	1000	2.66	34.42	0.63	27.48	61	1.05
836	2.93	34.366	0.58	27.41	1200	2.41	34.48	0.72	27.54	56	1.18
1014	2.64	34.426	0.63	27.48	1500	2.13	34.54	1.01	27.62	48	1.36
1280	2.32	34.497	0.75	27.56							
1745	1.95	34.585	1.25	27.66							
1750	1.95	34.584	1.32	27.66							

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
41	CNAV OSHAWA; August 20, 1959; 0145 GCT; 54°56'N, 154°13'W; sounding, missing; wind, 250°, 15 kt; weather, cloudy; sea, slight.										
0	12.20	32.628	6.07	24.73	0	12.20	32.63	6.07	24.73	322	0.00
9	11.97	32.606	6.26	24.76	10	11.97	32.61	6.26	24.76	320	0.03
19	11.95	32.604	6.23	24.76	20	11.85	32.61	6.23	24.78	318	0.06
28	11.15	32.655	6.25	24.95	30	10.29	32.69	6.34	25.12	285	0.10
46	4.68	32.886	6.97	26.06	50	4.48	32.91	6.87	26.10	192	0.14
70	3.66	33.007	6.46	26.26	75	3.69	33.07	6.04	26.31	172	0.19
93	3.78	33.288	4.70	26.47	100	3.92	33.43	3.88	26.57	148	0.23
116	4.20	33.722	2.15	26.77	125	4.18	33.79	1.77	26.83	123	0.26
139	4.14	33.881	1.22	26.90	150	4.12	33.90	1.11	26.92	114	0.29
162	4.10	33.916	1.00	26.94	175	4.02	33.93	0.82	26.96	110	0.32
185	3.96	33.943	0.68	26.97	200	3.95	33.97	0.59	26.99	108	0.35
209	3.95	33.982	0.54	27.00	250	3.90	34.03	0.44	27.05	102	0.40
232	3.92	34.010	0.44	27.03	300	3.85	34.08	0.41	27.09	98	0.46
278	3.88	34.061	0.44	27.07	400	3.71	34.15	0.35	27.16	92	0.55
372	3.75	34.130	0.36	27.14	500	3.55	34.21	0.35	27.23	85	0.65
467	3.61	34.194	0.34	27.21	600	3.38	34.26	0.36	27.28	80	0.73
561	3.46	34.243	0.36	27.26	700	3.20	34.31	0.39	27.34	74	0.82
656	3.28	34.293	0.37	27.32	800	3.03	34.35	0.43	27.38	71	0.90
751	3.12	34.328	0.41	27.36	1000	2.71	34.42	0.53	27.47	62	1.04
939	2.80	34.401	0.47	27.45	1200	2.46	34.46	0.71	27.53	56	1.18
1230	2.43	34.470	0.73	27.53	1500	2.20	34.52	0.92	27.60	50	1.36
1522	2.18	34.526	0.93	27.60	2000	1.86	34.59	1.50	27.68	42	1.63
1962	1.88	34.585	1.46	27.67							
2000	(1.86)a)	(34.589)a)	(1.50)a)	(27.68)							
42	CNAV OSHAWA; August 20, 1959; 0720 GCT; 55°50'N, 153°30'W; sounding, missing; wind, 260°, 15 kt; weather, cloudy; sea, moderate.										
0	12.20	32.428	6.14	24.58	0	12.20	32.43	6.14	24.58	337	0.00
9	12.50	32.411	6.05	24.51	10	12.49	32.41	6.05	24.51	343	0.03
19	12.40	32.414	6.00	24.53	20	12.39	32.42	6.00	24.53	341	0.07
28	12.36	32.430	6.00	24.55	30	11.56	32.46	6.09	24.72	323	0.10
47	6.02	32.700	6.74	25.76	50	5.85	32.72	6.70	25.80	221	0.16
70	4.90	32.847	6.44	26.00	75	4.86	32.88	6.29	26.04	198	0.21
93	4.72	32.998	5.85	26.14	100	4.90	33.14	5.31	26.23	180	0.26
117	5.28	33.436	4.12	26.43	125	5.39	33.52	3.84	26.48	156	0.30
140	5.58	33.677	3.37	26.58	150	5.52	33.72	3.18	26.63	142	0.34
163	5.44	33.780	2.95	26.68	175	5.30	33.81	2.72	26.72	133	0.37
187	5.16	33.841	2.51	26.76	200	5.00	33.86	2.32	26.79	127	0.41
210	4.89	33.870	2.17	26.81	250	4.60	33.92	1.75	26.88	118	0.47
233	4.74	33.900	1.89	26.86	300	4.31	33.97	1.38	26.96	110	0.53
280	4.38	33.945	1.51	26.93	400	4.02	34.08	0.84	27.07	100	0.64
445	3.91	34.119	0.64	27.12	500	3.82	34.15	0.58	27.15	92	0.74
544	3.76	34.173	0.54	27.18	600	3.68	34.21	0.53	27.21	87	0.83
643	3.62	34.230	0.53	27.23	700	3.54	34.25	0.48	27.26	82	0.92
743	3.48	34.260	0.46	27.27	800	3.34	34.30	0.39	27.31	77	1.01
842	3.25	34.321	0.34	27.34	1000	3.01	34.37	0.44	27.41	68	1.17
1040	2.95	34.385	0.46	27.42	1200	2.70	34.44	0.55	27.49	60	1.31
1239	2.65	34.450	0.57	27.50	1500	2.31	34.52	0.88	27.58	52	1.51
1538	2.27	34.524	0.93	27.59							
1638	2.14	34.547	0.95	27.62							
43	CNAV OSHAWA; August 20, 1959; 1334 GCT; 56°40'N, 152°37'W; sounding, 48 fm; wind, 270°, 10 kt; weather, overcast; sea, slight.										
0	11.00	32.159	6.36	24.59	0	11.00	32.16	6.36	24.59	336	0.00
9	11.03	32.148	6.31	24.57	10	11.03	32.15	6.32	24.57	338	0.03
19	11.01	32.138	6.36	24.57	20	10.66	32.16	6.32	24.64	331	0.07
28	8.20	32.276	5.97	25.13	30	7.95	32.30	5.89	25.18	280	0.10
47	6.20	32.442	5.35	25.53	50	6.19	32.45	5.34	25.54	245	0.15
70	6.11	32.473	5.25	25.57							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 20, 1959; 1537 GCT; 56°58'N, 152°33'W; sounding, 80 fm; wind, 250°, 20 kt; weather, partly cloudy; sea, moderate. 44

0	11.20	32.196	6.26	24.58	0	11.20	32.20	6.26	24.58	337	0.00
9	11.18	32.188	6.26	24.58	10	11.20	32.19	6.32	24.57	338	0.03
18	11.34	32.178	6.72	24.54	20	11.26	32.18	6.47	24.56	339	0.07
27	11.02	32.197	5.73	24.61	30	10.17	32.25	5.72	24.80	316	0.10
45	6.72	32.482	5.68	25.50	50	6.51	32.53	5.61	25.56	243	0.16
68	5.89	32.691	5.41	25.77	75	5.74	32.74	5.35	25.82	219	0.22
91	5.44	32.846	5.23	25.94	100	5.40	33.02	4.70	26.08	194	0.27
113	5.34	33.239	4.01	26.26							

CNAV OSHAWA; August 22, 1959; 0625 GCT; 57°58'N, 150°50'W; sounding, missing; wind, 320°, 15 kt; weather, partly cloudy; sea, moderate. 45

0	10.90	32.078	6.43	24.54	0	10.90	32.08	6.43	24.54	340	0.00
10	9.64	32.082	6.64	24.76	10	9.64	32.08	6.64	24.76	320	0.03
20	9.23	32.088	6.41	24.83	20	9.23	32.09	6.41	24.83	313	0.06
30	8.34	32.094	6.13	24.97	30	8.34	32.09	6.13	24.97	300	0.10
50	7.92	32.106	5.96	25.04	50	7.92	32.11	5.96	25.04	293	0.16
75	7.26	32.170	5.69	25.18	75	7.26	32.17	5.69	25.18	280	0.23

CNAV OSHAWA; August 22, 1959; 0857 GCT; 58°06'N, 150°00'W; sounding, missing; wind, 320°, 2 kt; weather, partly cloudy; sea, smooth. 46

0	11.30	31.960	6.80	24.38	0	11.30	31.96	6.80	24.38	356	0.00
10	10.98	31.957	6.75	24.43	10	10.98	31.96	6.75	24.43	351	0.04
20	10.73	31.985	6.73	24.50	20	10.73	31.98	6.73	24.50	344	0.07
30	10.50	32.013	6.57	24.56	30	10.50	32.01	6.57	24.56	339	0.10
50	7.78	32.287	6.38	25.20	50	7.78	32.29	6.38	25.20	278	0.17
75	6.49	32.536	6.00	25.57	75	6.49	32.54	6.00	25.57	242	0.23
100	5.60	32.755	5.44	25.85	100	5.60	32.76	5.44	25.85	216	0.29
125	5.50	32.878	5.07	25.96	125	5.50	32.88	5.07	25.96	205	0.34
149	5.51	33.016	4.91	26.07	150	5.51	33.03	4.87	26.08	194	0.39
174	5.44	33.250	4.22	26.26	175	5.43	33.27	4.16	26.28	175	0.44
199	5.19	33.743	2.70	26.68	200	5.19	33.74	2.69	26.68	137	0.48
224	5.15	33.769	2.49	26.70	250	5.08	33.80	2.36	26.74	131	0.55
249	5.08	33.797	2.37	26.74							
299	4.86	33.873	1.89	26.82							

CNAV OSHAWA; August 22, 1959; 1420 GCT; 58°25'N, 148°12'W; sounding, missing; wind, 320°, 10 kt; weather, partly cloudy; sea, slight. 47

0	12.30	32.252	6.46	24.42	0	12.30	32.25	6.46	24.42	352	0.00
10	12.99	32.263	6.26	24.30	10	12.99	32.26	6.26	24.30	363	0.04
20	(10.62)a)	32.264	6.46	(24.74)	20	10.62	32.26	6.46	24.74	321	0.07
30	8.94	32.467	6.64	25.17	30	8.94	32.47	6.64	25.17	280	0.10
50	6.40	32.608	6.29	25.64	50	6.40	32.61	6.29	25.64	236	0.15
74	5.46	32.716	6.35	25.84	75	5.46	32.73	6.31	25.85	216	0.21
99	5.38	32.966	5.41	26.04	100	5.41	32.99	5.33	26.06	196	0.26
124	5.98	33.459	3.73	26.36	125	5.97	33.47	3.71	26.37	166	0.31
149	5.78	33.709	3.12	26.58	150	5.77	33.71	3.11	26.59	146	0.35
179	5.58	33.788	2.90	26.67	175	5.60	33.78	2.92	26.66	139	0.38
199	5.40	33.855	2.67	26.74	200	5.39	33.86	2.65	26.75	130	0.42
223	5.17	33.881	2.34	26.79	250	4.94	33.90	2.08	26.83	123	0.48
248	4.95	33.900	2.11	26.83	300	4.60	33.95	1.58	26.91	115	0.54
298	4.61	33.951	1.59	26.91	400	4.28	34.02	0.96	27.00	107	0.66
400	4.28	34.018	0.96	27.00	500	4.07	34.09	0.65	27.07	100	0.77
500	4.07	34.086	0.65	27.07	600	3.83	34.14	0.64	27.14	93	0.87
600	3.83	34.138	0.64	27.14	700	3.65	34.21	0.48	27.22	86	0.97
700	3.65	34.214	0.48	27.22	800	3.39	34.28	0.47	27.30	78	1.06
800	3.39	34.279	0.47	27.30	1000	3.07	34.36	0.57	27.39	70	1.22
1000	3.07	34.362	0.57	27.39	1200	2.82	34.41	0.47	27.45	64	1.37
1200	2.82	(34.409)a)	(0.47)a)	(27.45)							
1205	2.80	34.410	0.47	27.45							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
48	CNAV OSHAWA; August 22, 1959; 1945 GCT; 58°45'N, 146°38'W; sounding, missing; wind, 320°, 10 kt; weather, cloudy; sea, moderate.										
0	13.50	32.258	6.24	24.19	0	13.50	32.26	6.24	24.19	374	0.00
9	(13.20)a)	32.346	6.18	(24.32)	10	13.20	32.36	6.18	24.33	360	0.04
19	(13.20)a)	32.446	6.19	(24.40)	20	12.61	32.46	6.28	24.52	342	0.07
28	8.52	32.532	6.94	25.28	30	8.22	32.55	7.02	25.34	264	0.10
46	6.24	32.655	7.50	25.69	50	6.06	32.67	7.29	25.73	227	0.15
69	5.34	32.748	6.45	25.88	75	5.22	32.79	6.45	25.92	209	0.21
93	4.90	32.889	6.45	26.04	100	4.75	32.93	6.42	26.09	193	0.26
116	4.45	33.017	6.36	26.19	125	4.63	33.16	5.78	26.28	175	0.30
139	4.89	33.355	4.95	26.41	150	5.17	33.50	4.38	26.49	155	0.35
162	5.45	33.657	3.80	26.58	175	5.29	33.72	3.49	26.65	140	0.38
185	5.18	33.766	3.28	26.70	200	5.02	33.80	2.99	26.74	131	0.42
208	4.94	33.818	2.84	26.77	250	4.36	33.84	2.51	26.85	121	0.48
232	4.52	33.836	2.72	26.83	300	4.15	33.89	1.96	26.91	115	0.54
278	4.13	33.845	2.21	26.88	400	4.19	34.05	1.05	27.03	104	0.66
390	4.21	34.041	1.09	27.02	500	3.96	34.10	0.77	27.10	97	0.76
488	3.99	34.092	0.81	27.09	600	3.76	34.16	0.53	27.16	92	0.86
586	3.78	34.149	0.54	27.15	700	3.61	34.22	0.49	27.23	85	0.96
684	3.64	34.213	0.49	27.22	800	3.41	34.28	0.48	27.29	79	1.05
782	3.44	34.271	0.48	27.28	1000	3.06	34.36	0.47	27.39	70	1.21
977	3.10	34.348	0.46	27.38	1200	2.74	34.43	0.55	27.47	62	1.36
1271	2.64	34.449	0.57	27.50	1500	2.34	34.50	0.74	27.57	53	1.56
1564	2.27	34.513	0.78	27.58	2000	1.92	34.59	1.47	27.67	43	1.84
2054	1.88	(34.597)b)	1.55	(27.68)							
2059	(1.88)c)	(34.598)c)	1.67	(27.68)							
49	CNAV OSHAWA; August 23, 1959; 0143 GCT; 58°57'N, 145°00'W; sounding, missing; wind, calm; weather, partly cloudy; sea, smooth.										
0	13.40	31.612	6.27	23.72	0	13.40	31.61	6.27	23.72	419	0.00
10	12.98	31.802	6.32	23.94	10	12.98	31.80	6.32	23.94	398	0.04
20	8.82	32.066	6.24	24.87	20	8.82	32.07	6.24	24.87	309	0.08
30	7.28	32.117	5.89	25.14	30	7.28	32.12	5.89	25.14	283	0.11
50	6.35	32.253	(6.03)b)	25.36	50	6.35	32.25	6.03	25.36	262	0.16
74	5.81	32.465	6.14	25.60	75	5.81	32.47	6.14	25.60	240	0.22
99	5.75	32.593	6.13	25.71	100	5.74	32.60	6.13	25.71	229	0.28
124	5.43	32.715	6.06	25.84	125	5.45	32.73	6.01	25.85	216	0.34
149	5.79	33.021	4.97	26.00	150	5.80	33.04	4.93	26.05	197	0.39
174	6.00	33.395	3.88	26.31	175	5.99	33.40	3.85	26.32	171	0.44
199	5.78	33.621	3.32	26.51	200	5.77	33.63	3.30	26.52	152	0.48
223	5.56	33.764	3.01	26.65	250	5.32	33.83	2.77	26.73	132	0.55
248	5.34	33.822	2.78	26.72	300	4.90	33.92	2.45	26.85	121	0.62
298	4.91	33.915	2.49	26.85	400	4.46	34.01	1.23	26.98	109	0.74
400	4.46	34.013	1.23	26.98	500	4.15	34.08	0.87	27.06	101	0.85
500	4.15	34.079	0.87	27.06	600	3.94	34.16	0.76	27.14	93	0.95
600	3.94	34.155	0.76	27.14	700	3.76	34.22	0.43	27.21	87	1.05
700	3.76	34.216	0.43	27.21	800	3.58	34.26	0.38	27.26	82	1.14
800	3.58	34.259	0.38	27.26	1000	3.21	34.35	0.52	27.37	72	1.31
1000	3.21	34.354	0.52	27.37	1200	2.80	34.44	0.49	27.48	61	1.46
1200	2.80	34.442	0.49	27.48	1500	2.35	34.52	0.69	27.58	52	1.65
1500	2.35	34.520	0.69	27.58	2000	1.89	34.62	1.47	27.70	40	1.93
1505	2.36	34.513	0.66	27.57	2500	1.69	34.65	1.92	27.74	37	2.17
2000	1.89	34.618	1.47	27.70	3000	1.56	34.68	2.53	27.77	34	2.40
2500	1.69	(34.652)b)	1.92	(27.74)	3500	1.47	34.69	2.99	27.78	33	2.62
3000	1.56	34.679	2.53	27.77							
3500	1.47	34.689	2.99	27.78							
3700	1.48	34.694	3.05	27.79							
3705	1.49	34.697	3.00	27.79							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

50

CNAV OSHAWA; August 23, 1959; 0845 GCT; 58°00'N, 145°00'W; sounding, missing; wind, 270°, 1 kt; weather, cloudy; sea, smooth.

0	14.00	32.238	6.29	24.08	0	14.00	32.24	6.29	24.08	384	0.00
10	13.58	32.324	6.36	24.23	10	13.58	32.32	6.36	24.23	370	0.04
20	13.13	32.451	5.85	24.42	20	13.13	32.45	5.85	24.42	352	0.07
29	9.16	32.632	6.73	25.26	30	8.98	32.63	6.71	25.29	269	0.11
49	6.23	32.649	6.37	25.69	50	6.18	32.65	6.37	25.70	230	0.16
74	5.11	32.743	6.48	25.90	75	5.12	32.76	6.43	25.91	210	0.21
98	5.27	33.014	5.25	26.09	100	5.31	33.06	5.13	26.13	189	0.26
123	5.73	33.524	3.89	26.44	125	5.73	33.54	3.82	26.46	158	0.31
147	5.68	33.706	3.11	26.59	150	5.66	33.72	3.07	26.61	144	0.34
172	5.53	33.813	2.76	26.69	175	5.49	33.82	2.74	26.71	134	0.38
197	5.21	33.865	2.63	26.77	200	5.18	33.87	2.59	26.78	128	0.41
221	4.97	33.877	2.33	26.81	250	4.88	33.92	2.18	26.86	120	0.48
246	4.90	33.917	2.24	26.85	300	4.64	33.96	1.60	26.91	115	0.54
295	4.66	33.954	1.65	26.91	400	4.25	34.05	0.90	27.02	105	0.65
400	4.25	34.046	0.90	27.02	500	4.00	34.13	0.60	27.12	95	0.76
500	4.00	34.128	0.60	27.12	600	3.84	34.19	0.63	27.18	90	0.86
600	3.84	34.188	0.63	27.18	700	3.61	34.25	0.39	27.25	83	0.95
700	3.61	34.247	0.39	27.25	800	3.39	34.30	0.48	27.31	77	1.04
800	3.39	34.300	0.48	27.31	1000	3.01	34.38	0.49	27.41	68	1.20
1000	3.01	34.379	0.49	27.41	1200	2.70	34.44	0.49	27.49	60	1.34
1300	2.56	34.467	0.49	27.52	1500	2.35	34.51	0.80	27.57	53	1.53
1600	2.26	34.525	0.93	27.59	2000	1.96	34.59	1.41	27.67	43	1.82
2100	1.89	34.600	1.51	27.68							
2105	1.89	34.600	1.49	27.68							

51

CNAV OSHAWA; August 23, 1959; 1545 GCT; 57°00'N, 145°02'W; sounding, missing; wind, 240°, 10 kt; weather, overcast; sea, slight.

0	13.10	32.709	(4.50)a)	24.62	0	13.10	32.71	4.50	24.62	333	0.00
10	13.13	32.705	6.18	24.61	10	13.13	32.70	6.18	24.61	334	0.03
20	(10.00)b)	32.746	7.17	(25.22)	20	10.00	32.75	7.17	25.22	276	0.06
30	5.98	32.802	7.06	25.84	30	5.98	32.80	7.06	25.84	217	0.09
50	4.92	32.865	6.92	26.02	50	4.92	32.86	6.92	26.02	200	0.13
75	4.38	32.961	6.70	26.15	75	4.38	32.96	6.70	26.15	187	0.18
99	4.09	33.208	5.63	26.38	100	4.10	33.23	5.53	26.39	164	0.22
124	4.30	33.759	3.37	26.79	125	4.29	33.76	3.36	26.79	127	0.26
149	4.12	33.788	3.07	26.83	150	4.11	33.79	3.07	26.83	123	0.29
174	(3.95)c)	(33.808)c)	(2.95)c)	(26.87)	175	3.94	33.81	2.95	26.87	119	0.32
199	3.80	33.825	2.84	26.89	200	3.79	33.83	2.82	26.90	116	0.35
224	3.66	33.847	2.27	26.93	250	3.66	33.88	1.20	26.95	111	0.41
248	3.65	33.877	1.20	26.95	300	3.80	33.99	1.20	27.02	105	0.47
298	3.80	33.986	1.20	27.02	400	3.79	34.08	1.12	27.10	97	0.57
371	3.81	34.047	1.34	27.07	500	3.69	34.17	0.60	27.18	90	0.67
464	3.74	34.144	0.67	27.15	600	3.56	34.23	0.64	27.24	84	0.76
556	3.62	34.202	0.50	27.21	700	3.37	34.29	0.63	27.30	78	0.85
649	3.50	34.265	0.78	27.27	800	3.18	34.33	0.52	27.36	73	0.93
744	3.27	34.305	0.49	27.33	1000	2.89	34.41	0.59	27.45	64	1.08
934	2.99	34.394	0.55	27.42	1200	2.62	34.47	0.71	27.52	57	1.22
1228	2.59	34.474	0.72	27.52	1500	2.26	34.54	1.00	27.60	50	1.40
1522	2.24	34.544	1.02	27.61	2000	1.87	34.61	1.58	27.69	41	1.67
2020	1.86	34.610	1.60	27.69							
2025	1.86	34.610	1.59	27.69							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.
c) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
52	CNAV OSHAWA; August 23, 1959; 2155 GCT; 55°59'N, 145°03'W; sounding, missing; wind, 220°, 15 kt; weather, overcast; sea, slight.										
0	(12.60)a)	32.804	6.27	(24.79)	0	12.60	32.80	6.27	24.79	317	0.00
10	12.57	32.762	6.41	24.77	10	12.57	32.76	6.41	24.77	319	0.03
19	12.55	32.763	6.36	24.77	20	12.19	32.77	6.40	24.84	312	0.06
29	9.42	32.834	6.62	25.38	30	9.18	32.84	6.65	25.42	257	0.09
49	5.50	32.926	7.17	26.00	50	5.44	32.93	7.15	26.01	201	0.14
73	4.22	33.008	6.71	26.20	75	4.18	33.03	6.59	26.23	180	0.19
97	3.82	33.280	5.38	26.46	100	3.83	33.33	5.08	26.50	154	0.23
121	3.87	33.668	3.26	26.76	125	3.87	33.70	3.05	26.79	127	0.26
146	3.89	33.848	2.00	26.90	150	3.88	33.86	1.89	26.92	114	0.30
170	3.82	33.935	1.34	26.98	175	3.81	33.95	1.30	26.99	108	0.32
194	3.79	33.985	1.14	27.02	200	3.79	33.99	1.09	27.03	104	0.35
219	3.78	34.018	0.92	27.05	250	3.78	34.06	0.69	27.08	99	0.40
243	3.78	34.051	0.69	27.08	300	3.76	34.12	0.65	27.14	93	0.45
291	3.77	34.114	0.66	27.13	400	3.66	34.21	0.54	27.21	87	0.55
361	3.71	34.176	0.57	27.18	500	3.52	34.28	0.50	27.28	80	0.63
452	3.59	34.244	0.49	27.25	600	3.38	34.32	0.50	27.33	75	0.72
543	3.46	34.303	0.50	27.31	700	3.22	34.37	0.54	27.38	71	0.80
633	3.33	34.335	0.50	27.35	800	3.07	34.40	0.56	27.42	67	0.87
725	3.18	34.380	0.55	27.40	1000	2.79	34.45	0.60	27.49	60	1.01
909	2.92	34.426	0.58	27.46	1200	2.53	34.50	0.64	27.55	55	1.14
1208	2.52	34.497	0.64	27.55	1500	2.21	34.57	0.93	27.63	47	1.32
1507	2.20	34.571	0.94	27.63	2000	1.87	34.64	1.61	27.71	39	1.57
2005	1.87	34.639	1.62	27.71							
2010	1.88	34.631	1.64	27.71							
53	CNAV OSHAWA; August 24, 1959; 0425 GCT; 55°00'N, 145°00'W; sounding, missing; wind, 260°, 20 kt; weather, overcast; sea, moderate.										
0	(12.20)a)	32.596	6.20	(24.71)	0	12.20	32.60	6.20	24.71	324	0.00
10	(12.10)a)	32.568	6.17	(24.70)	10	12.10	32.57	6.17	24.70	325	0.03
19	(12.00)a)	32.578	6.19	(24.73)	20	11.98	32.58	6.18	24.74	321	0.06
29	11.82	32.581	6.12	24.77	30	11.45	32.60	6.17	24.85	311	0.10
48	6.00	32.805	7.06	25.84	50	5.93	32.81	7.02	25.85	216	0.15
72	5.28	(32.834)b)	6.72	(25.95)	75	5.19	32.84	6.66	25.96	205	0.20
96	4.66	32.855	6.34	26.04	100	4.75	32.94	5.95	26.09	193	0.25
120	5.14	(33.300)b)	4.16	(26.34)	125	5.10	33.38	4.01	26.41	163	0.30
143	4.96	33.656	3.53	26.64	150	4.81	33.70	3.46	26.69	136	0.34
167	4.46	33.808	3.33	26.81	175	4.54	33.81	3.01	26.81	125	0.37
191	4.68	33.823	2.43	26.80	200	4.63	33.85	2.21	26.82	124	0.40
215	4.54	33.882	1.85	26.86	250	4.36	33.94	1.49	26.93	113	0.46
239	4.39	33.941	1.66	26.93	300	4.23	33.98	0.94	26.97	110	0.52
287	4.27	33.955	0.97	26.95	400	3.98	34.12	0.76	27.11	96	0.63
386	4.03	34.107	0.76	27.10	500	3.68	34.20	0.72	27.20	88	0.72
483	3.73	34.187	0.74	27.19	600	3.46	34.25	0.59	27.27	81	0.81
580	3.48	34.243	0.59	27.26	700	3.34	34.31	0.55	27.32	76	0.90
677	3.39	34.292	0.57	27.31	800	3.14	34.36	0.47	27.38	71	0.98
776	3.18	34.349	0.46	27.37	1000	2.85	34.42	0.54	27.46	63	1.12
972	2.89	34.418	0.52	27.45	1200	2.58	34.47	0.64	27.52	57	1.26
1169	2.62	34.464	0.63	27.51	1500	2.28	34.54	0.76	27.61	49	1.44
1464	2.28	34.539	0.72	27.60	2000	1.93	34.62	1.37	27.69	41	1.71
1469	2.31	(34.540)b)	(0.73)b)	(27.60)	2500	1.71	34.65	2.26	27.74	37	1.96
1956	1.95	34.611	1.28	27.69	3000	1.58	34.68	3.02	27.77	34	2.19
2444	1.73	34.649	2.15	27.73	3500	1.49	34.70	2.99	27.79	32	2.41
2932	1.59	34.680	3.02	27.77							
3420	1.49	34.697	3.02	27.79							
3616	1.49	34.699	2.95	27.79							
3621	1.49	34.704	2.95	27.79							

a) Value extrapolated graphically.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

54

CNAV OSHAWA; August 24, 1959; 1035 GCT; 55°19'N, 144°00'W; sounding, missing; wind, 270°, 25 kt; weather, intermittent slight rain; sea, very rough.

0	12.70	32.646	5.14	24.65	0	12.70	32.65	5.14	24.65	330	0.00
10	12.65	32.621	6.17	24.64	10	12.65	32.62	6.17	24.64	331	0.03
20	12.52	32.758	6.17	24.77	20	12.52	32.76	6.17	24.77	319	0.07
30	11.90	32.762	6.19	24.89	30	11.90	32.76	6.19	24.89	307	0.10
49	5.14	32.915	7.03	26.03	50	5.10	32.92	7.04	26.04	198	0.15
74	4.40	32.950	7.24	26.14	75	4.37	32.96	7.19	26.15	187	0.20
99	3.66	33.086	6.14	26.32	100	3.68	33.11	6.04	26.34	169	0.24
123	4.04	33.598	3.96	26.69	125	4.03	33.61	3.95	26.70	135	0.28
148	3.94	33.771	3.81	26.84	150	3.92	33.78	3.73	26.84	122	0.31
173	3.73	33.812	2.93	26.89	175	3.72	33.82	2.86	26.90	116	0.34
189	3.66	33.852	2.33	26.93	200	3.65	33.86	2.23	26.94	112	0.37
222	3.63	33.890	2.04	26.96	250	3.65	33.92	1.50	26.98	109	0.43
247	3.65	33.912	1.53	26.98	300	3.70	34.00	1.04	27.05	102	0.48
296	3.70	33.998	1.06	27.04	400	3.70	34.11	0.74	27.13	94	0.58
378	3.72	34.096	0.75	27.12	500	3.60	34.18	0.64	27.20	88	0.68
473	3.63	34.147	0.69	27.17	600	3.46	34.27	0.50	27.28	80	0.77
569	3.53	34.254	0.52	27.26	700	3.26	34.31	0.47	27.33	75	0.85
665	3.32	34.292	(0.48)a)	27.31	800	3.11	34.36	0.48	27.38	71	0.93
760	3.17	34.340	0.45	27.36	1000	2.83	34.42	0.60	27.46	63	1.08
951	2.90	34.406	0.57	27.44	1200	2.58	34.48	0.74	27.53	56	1.21
1238	2.54	34.492	0.76	27.54	1500	2.27	34.54	0.96	27.61	49	1.40
1525	2.25	34.548	(0.97)a)	27.61	2000	1.93	34.61	1.27	27.69	41	1.67
2005	1.93	34.614	1.27	27.69							

55

CNAV OSHAWA; August 24, 1959; 1523 GCT; 55°35'N, 143°00'W; sounding, missing; wind, 250°, 25 kt; weather, light fog; sea, rough.

0	14.00	32.757	6.32	24.48	0	14.00	32.76	6.32	24.48	346	0.00
10	12.74	32.748	6.27	24.72	10	12.74	32.75	6.27	24.72	323	0.03
19	(11.59)a)	32.747	6.25	(24.94)	20	11.49	32.75	6.26	24.96	300	0.06
29	10.68	32.796	6.35	25.14	30	10.29	32.80	6.41	25.21	277	0.09
48	4.58	32.923	7.17	26.10	50	4.49	32.93	7.12	26.12	190	0.14
72	3.61	33.024	6.74	26.28	75	3.59	33.05	6.56	26.30	173	0.19
96	3.50	33.214	5.44	26.44	100	3.56	33.29	5.01	26.49	155	0.23
120	3.84	33.608	3.05	26.72	125	3.84	33.64	2.89	26.75	130	0.26
145	3.84	33.766	2.30	26.84	150	3.85	33.79	2.05	26.86	120	0.30
169	3.88	33.882	1.18	26.93	175	3.84	33.89	1.15	26.94	112	0.33
193	3.74	33.914	(1.09)a)	26.97	200	3.74	33.92	1.06	26.98	109	0.35
217	3.75	33.941	1.01	26.99	250	3.77	33.99	0.96	27.03	104	0.41
241	3.77	33.979	1.05	27.02	300	3.78	34.05	0.58	27.08	99	0.46
289	3.79	34.039	0.58	27.07	400	3.71	34.15	0.52	27.16	92	0.56
361	3.76	34.116	0.58	27.13	500	3.57	34.22	0.44	27.23	85	0.65
453	3.64	34.188	0.43	27.20	600	3.43	34.27	0.41	27.29	79	0.74
545	3.50	34.243	0.45	27.26	700	3.28	34.32	0.45	27.34	74	0.82
637	3.39	34.292	0.39	27.31	800	3.12	34.36	0.48	27.38	71	0.90
733	3.22	34.331	0.48	27.35	1000	2.84	34.42	0.53	27.46	63	1.05
925	2.95	34.402	0.48	27.43	1200	2.58	34.47	0.63	27.52	57	1.18
1219	2.56	34.473	0.64	27.53	1500	2.27	34.54	0.92	27.60	50	1.37
1512	2.26	34.542	0.93	27.61	2000	1.89	34.61	1.53	27.69	41	1.64
2004	1.89	34.606	1.53	27.69							
2009	1.91	34.603	1.47	27.68							

a) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
56	CNAV OSHAWA; August 24, 1959; 1948 GCT; 55°55'N, 142°00'W; sounding, missing; wind, 250°, 25 kt; weather, overcast; sea, rough.										
0	13.00	32.791	6.25	24.70	0	13.00	32.79	6.25	24.70	325	0.00
10	12.84	32.766	6.22	24.72	10	12.84	32.77	6.22	24.72	323	0.03
19	12.30	32.774	6.14	24.83	20	12.14	32.78	6.16	24.86	310	0.06
29	10.92	(32.837)a)	6.31	(25.13)	30	10.57	32.84	6.33	25.19	279	0.09
49	5.25	32.926	6.69	26.03	50	5.20	32.93	6.71	26.03	199	0.14
73	4.26	32.983	7.12	26.18	75	4.20	32.99	7.06	26.20	183	0.19
97	3.57	33.105	6.36	26.34	100	3.59	33.14	6.09	26.37	166	0.23
121	3.71	33.383	4.37	26.55	125	3.75	33.45	4.05	26.60	145	0.27
146	3.92	33.787	2.55	26.85	150	3.90	33.80	2.42	26.87	119	0.31
170	3.78	33.864	1.79	26.93	175	3.76	33.87	1.70	26.94	112	0.34
194	3.67	33.902	1.40	26.97	200	3.72	33.92	1.24	26.98	109	0.36
218	3.88	33.975	0.82	27.01	250	3.90	34.01	0.62	27.03	104	0.42
243	3.91	34.005	0.58	27.03	300	3.84	34.06	0.80	27.08	99	0.47
291	3.85	34.049	0.83	27.07	400	3.72	34.15	0.49	27.16	92	0.57
396	3.73	34.146	0.49	27.16	500	3.60	34.20	0.46	27.22	86	0.66
495	3.61	34.200	0.46	27.21	600	3.42	34.27	0.44	27.28	81	0.75
595	3.43	34.263	0.44	27.28	700	3.26	34.31	0.50	27.33	75	0.84
694	3.27	34.310	0.50	27.33	800	3.08	34.34	0.49	27.37	72	0.92
794	3.09	34.340	0.48	27.37	1000	2.83	34.41	0.66	27.45	64	1.06
993	2.84	34.408	0.66	27.45	1200	2.61	34.47	0.67	27.52	57	1.20
1292	2.52	34.498	0.67	27.55	1500	2.30	34.52	0.90	27.59	51	1.39
1590	2.22	34.536	0.99	27.60	2000	1.92	34.60	1.50	27.68	42	1.66
2088	1.86	34.618	1.60	27.70							
2093	1.88	34.616	(1.60)b)	27.70							
57	CNAV OSHAWA; August 24, 1959; 2346 GCT; 56°14'N, 141°00'W; sounding, missing; wind, 290°, 20 kt; weather, fog in patches; sea, moderate.										
0	13.30	32.354	6.19	24.31	0	13.30	32.35	6.19	24.31	362	0.00
10	13.06	32.323	6.20	24.33	10	13.06	32.32	6.20	24.33	360	0.04
20	12.42	32.320	6.10	24.45	20	12.42	32.32	6.10	24.45	349	0.07
30	8.08	32.572	6.44	25.38	30	8.08	32.57	6.44	25.38	260	0.10
49	6.63	32.677	6.10	25.66	50	6.59	32.68	6.10	25.67	233	0.15
74	5.88	32.810	6.10	25.86	75	5.88	32.82	6.06	25.87	214	0.21
99	5.88	33.059	5.22	26.06	100	5.89	33.08	5.17	26.07	195	0.26
123	6.03	33.461	4.12	26.36	125	6.01	33.48	4.04	26.37	166	0.31
148	5.84	33.679	3.20	26.55	150	5.82	33.69	3.20	26.56	148	0.35
173	5.55	33.802	3.23	26.68	175	5.52	33.81	3.19	26.69	136	0.38
197	5.26	33.857	2.82	26.76	200	5.23	33.86	2.78	26.77	128	0.42
222	5.06	33.906	2.49	26.82	250	4.85	33.92	2.09	26.86	120	0.48
247	4.86	33.918	2.14	26.86	300	4.75	34.00	1.43	26.93	113	0.54
296	4.77	33.992	1.47	26.92	400	4.28	34.07	0.87	27.04	103	0.65
378	4.35	34.049	0.94	27.02	500	3.98	34.15	0.68	27.14	93	0.76
473	4.07	34.133	0.68	27.11	600	3.70	34.22	0.60	27.22	86	0.85
568	3.76	34.201	0.68	27.20	700	3.50	34.27	0.45	27.28	80	0.94
662	3.60	34.249	0.47	27.25	800	3.28	34.31	0.45	27.33	75	1.03
757	3.36	34.292	0.40	27.31	1000	2.95	34.38	0.57	27.42	67	1.18
946	3.04	34.364	0.57	27.40	1200	2.66	34.44	0.55	27.49	60	1.32
1230	2.62	34.452	0.55	27.50	1500	2.37	34.51	0.74	27.57	53	1.52
1513	2.36	34.513	0.75	27.57	2000	1.94	34.60	1.31	27.68	42	1.80
2032	1.92	34.602	1.34	27.68							
2037	1.93	34.602	1.30	27.68							

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 25, 1959; 0505 GCT; 56°30'N, 140°00'W; sounding, missing; wind, 290°, 25 kt; weather, fog in patches; sea, rough. 58

0	13.40	32.206	6.19	24.17	0	13.40	32.21	6.19	24.17	376	0.00
9a)	13.54u	32.191u	6.28u	24.13	10	13.45	32.20	6.27	24.16	377	0.04
19a)	12.82u	32.235u	6.16u	24.31	20	12.70	32.28	6.17	24.37	357	0.08
28a)	11.84u	32.621u	6.23u	24.79	30	11.14	32.61	6.25	24.91	305	0.11
47a)	(6.30)b)	32.528u	(6.45)c)	(25.59)	50	6.15	32.55	6.47	25.62	238	0.16
70a)	(5.30)b)	32.668u	6.63u	(25.82)	75	5.16	32.70	6.72	25.86	215	0.22
93a)	(4.70)b)	32.800u	7.01u	(25.99)	100	4.64	32.82	6.96	26.01	201	0.27
117a)	(4.50)b)	32.868u	6.84u	(26.06)	125	4.56	32.93	6.69	26.11	191	0.32
140a)	4.66u	33.039u	6.41u	26.18	150	4.65	33.29	5.35	26.38	166	0.37
163a)	4.64u	33.594u	4.08u	26.62	175	4.46	33.72	3.64	26.74	131	0.40
187a)	4.30u	33.842u	3.24u	26.86	200	4.16	33.83	3.18	26.86	120	0.44
210a)	4.05u	33.823u	3.15u	26.87	250	3.89	33.84	2.36	26.90	116	0.50
233a)	3.95u	33.793u	2.71u	26.85	300	3.79	33.94	1.62	26.99	108	0.56
280a)	3.79u	33.912u	1.79u	26.96	400	3.79	34.08	0.91	27.09	98	0.66
396	3.80	34.072	0.92	27.09	500	3.68	34.14	0.66	27.15	92	0.76
496	3.68	34.132	0.66	27.15	600	3.56	34.22	0.62	27.23	85	0.86
595	3.57	34.217	0.63	27.23	700	3.39	34.27	0.48	27.29	79	0.94
695	3.40	34.268	0.48	27.29	800	3.24	34.31	0.40	27.33	75	1.03
794	3.25	34.305	0.40	27.33	1000	2.98	34.40	0.46	27.43	66	1.18
993	2.97	34.393	0.55	27.43	1200	2.73	34.45	0.66	27.49	60	1.32
998	2.98	34.394	0.46	27.43	1500	2.30	34.52	0.86	27.59	51	1.52
1191	2.74	34.448	0.65	27.49	2000	1.91	34.61	1.43	27.69	41	1.79
1489	2.31	34.518	0.85	27.58	2500	1.69	34.65	2.18	27.73	38	2.04
1986	1.92	34.609	1.41	27.69	3000	1.59	34.67	2.55	27.76	35	2.27
2482	1.69	34.645	2.17	27.73							
2977	1.59	34.670	2.54	27.76							
3000	(1.59)d)	(34.671)d)	(2.55)d)	(27.76)							

CNAV OSHAWA; August 25, 1959; 0956 GCT; 56°12'N, 139°00'W; sounding, missing; wind, 270°, 28 kt; weather, intermittent slight drizzle; sea, moderate. 59

0	13.20	32.390	6.29	24.36	0	13.20	32.39	6.29	24.36	358	0.00
10	(13.00)e)	32.381	5.88	(24.39)	10	13.00	32.38	5.88	24.39	355	0.04
20	12.60	32.371	6.00	24.46	20	12.60	32.37	6.00	24.46	348	0.07
30	10.42	32.543	5.86	24.99	30	10.42	32.54	5.86	24.99	298	0.10
49	6.28	32.623	5.86	25.66	50	6.23	32.63	5.90	25.68	232	0.16
74	5.16	32.795	6.73	25.93	75	5.15	32.80	6.71	25.94	207	0.21
99	4.90	32.944	6.28	26.08	100	4.93	32.97	6.22	26.10	192	0.26
123	5.53	33.428	4.80	26.39	125	5.55	33.45	4.69	26.41	163	0.31
148	5.81	33.703	3.53	26.57	150	5.78	33.71	3.49	26.58	146	0.35
173	5.46	33.810	3.18	26.70	175	5.44	33.82	3.16	26.71	134	0.38
197	5.27	33.862	2.95	26.76	200	5.23	33.86	2.89	26.77	128	0.42
222	4.98	33.880	2.51	26.81	250	4.80	33.92	2.18	26.86	120	0.48
247	4.80	33.913	2.24	26.86	300	4.73	34.00	1.43	26.93	113	0.54
296	4.76	33.994	1.46	26.93	400	4.14	34.06	1.01	27.05	102	0.65
393	4.15	34.053	1.03	27.04	500	4.04	34.13	0.73	27.11	96	0.76
491	4.05	34.123	0.75	27.11	600	3.88	34.22	0.56	27.20	88	0.86
591	3.90	34.212	0.57	27.19	700	3.65	34.27	0.50	27.27	81	0.95
691	3.68	34.269	0.50	27.26	800	3.36	34.32	0.45	27.33	75	1.03
791	3.38	34.312	0.45	27.32	1000	3.05	34.40	0.49	27.42	67	1.19
990	3.07	34.398	0.49	27.42	1200	2.76	34.45	0.43	27.49	60	1.33
1288	2.64	34.468	0.40	27.51	1500	2.37	34.52	0.67	27.58	52	1.52
1587	2.27	34.536	0.77	27.60							

a) Suspected pretrip.
b) Value uncertain; interpolated graphically.
c) Value uncertain; interpolated by two-point logarithmic method.
d) Value extrapolated by two-point logarithmic method.
e) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
60	CNAV OSHAWA; August 25, 1959; 1410 GCT; 55°56'N, 138°00'W; sounding, missing; wind, 290°, 28 kt; weather, overcast; sea, rough.										
0	13.40	32.516	6.20	24.41	0	13.41	32.50	6.19	24.40	354	0.00
10	13.44	32.449	6.16	24.35	10	13.44	32.45	6.16	24.35	359	0.04
20	12.16	32.637	6.25	24.75	20	12.16	32.64	6.25	24.75	320	0.07
30	9.27	32.625	6.90	25.24	30	9.27	32.62	6.90	25.24	274	0.10
49	(6.70)a)	32.714	6.45	(25.68)	50	6.65	32.72	6.45	25.69	231	0.15
74	5.66	32.814	6.53	25.89	75	5.66	32.82	6.47	25.90	211	0.21
99	5.62	32.981	5.17	26.03	100	5.64	33.00	5.13	26.04	198	0.26
123	6.02	33.413	4.31	26.32	125	6.00	33.44	4.24	26.34	169	0.30
148	5.82	33.663	3.53	26.54	150	5.80	33.68	3.60	26.55	149	0.34
173	5.60	33.809	4.27	26.68	175	5.56	33.81	4.14	26.69	136	0.38
197	5.13	33.863	2.84	26.78	200	5.13	33.87	2.81	26.79	127	0.42
222	5.10	33.895	2.54	26.81	250	4.80	33.95	2.18	26.89	117	0.48
247	4.81	33.951	2.22	26.89	300	4.59	33.97	1.74	26.93	113	0.54
296	4.60	33.966	1.77	26.92	400	4.30	34.06	0.97	27.03	104	0.65
397	4.31	34.059	0.99	27.03	500	3.97	34.13	0.77	27.12	95	0.76
496	3.98	34.128	0.78	27.12	600	3.69	34.18	0.60	27.18	90	0.85
596	3.69	34.171	0.62	27.18	700	3.61	34.25	0.47	27.25	83	0.94
695	3.62	34.252	0.47	27.25	800	3.39	34.30	0.45	27.31	77	1.03
794	3.40	34.298	0.45	27.31	1000	3.07	34.37	0.60	27.40	69	1.19
994	3.08	34.370	0.60	27.40	1200	2.74	34.44	0.68	27.48	61	1.34
1292	2.60	34.469	0.72	27.52	1500	2.36	34.52	0.81	27.58	52	1.53
1591	2.26	34.535	0.84	27.60	2000	1.96	34.60	1.40	27.68	42	1.81
2088	1.90	34.611	1.50	27.69							
2093	1.89	34.615	1.59	27.69							
61	CNAV OSHAWA; August 25, 1959; 1820 GCT; 55°30'N, 137°01'W; sounding, missing; wind, 280°, 25 kt; weather, overcast; sea, rough.										
0	13.50	32.427	6.10	24.32	0	13.50	32.43	6.10	24.32	361	0.00
10	13.56	32.411	6.12	24.30	10	13.56	32.41	6.12	24.30	363	0.04
20	(12.59)b)	32.416	6.08	(24.49)	20	12.59	32.42	6.08	24.49	345	0.07
30	11.91	32.465	6.47	24.66	30	11.91	32.46	6.47	24.66	329	0.11
50	7.52	32.684	6.88	25.55	50	7.52	32.68	6.88	25.55	244	0.16
75	6.12	32.752	6.63	25.79	75	6.12	32.75	6.63	25.79	222	0.22
100	5.40	32.813	6.63	25.92	100	5.40	32.81	6.63	25.92	209	0.28
125	5.84	33.223	5.06	26.19	125	5.84	33.22	5.06	26.19	184	0.33
150	5.92	33.593	3.96	26.47	150	5.92	33.59	3.96	26.47	157	0.37
175	5.54	33.749	3.54	26.64	175	5.54	33.75	3.54	26.64	141	0.41
200	5.18	33.831	3.11	26.75	200	5.18	33.83	3.11	26.75	130	0.44
225	5.00	33.865	2.98	26.80	250	4.82	33.89	2.56	26.84	122	0.51
250	4.82	33.890	2.56	26.84	300	4.49	33.93	2.11	26.90	116	0.57
300	4.49	33.927	2.11	26.90	400	4.37	34.05	1.10	27.02	105	0.68
398	4.38	34.051	1.11	27.01	500	4.13	34.14	0.69	27.11	96	0.79
497	4.14	34.137	0.71	27.11	600	3.82	34.21	0.52	27.20	88	0.89
597	3.83	34.211	0.52	27.20	700	3.64	34.27	0.45	27.26	82	0.98
697	3.65	34.265	0.45	27.26	800	3.42	34.31	0.43	27.32	76	1.06
796	3.43	34.306	0.43	27.31	1000	3.04	34.40	0.45	27.42	67	1.22
995	3.05	34.393	0.45	27.42	1200	2.69	34.45	0.57	27.50	59	1.36
1293	2.54	34.478	0.63	27.53	1500	2.28	34.53	0.90	27.60	50	1.55
1592	2.17	34.554	1.00	27.62	2000	1.90	34.59	1.50	27.67	43	1.83
2088	1.85	34.592	1.59	27.68							
2093	1.87	34.621	1.57	27.70							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV OSHAWA; August 25, 1959; 2228 GCT; 55°18'N, 135°59'W; sounding, missing; wind, 310°, 20 kt; weather, fog; sea, moderate.

0	13.40	32.124	6.05	24.11	0	13.40	32.12	6.05	24.11	382	0.00
10	13.20	32.126	5.98	24.15	10	13.20	32.13	5.98	24.15	378	0.04
20	10.41	32.368	6.08	24.85	20	10.41	32.37	6.08	24.85	311	0.07
30	9.04	32.371	5.68	25.08	30	9.04	32.37	5.68	25.08	289	0.10
50	(7.40)a)	32.632	5.94	(25.52)	50	7.40	32.63	5.94	25.52	247	0.16
74	6.50	32.810	5.73	25.78	75	6.48	32.82	5.72	25.79	222	0.22
99	6.07	32.937	5.56	25.94	100	6.08	32.96	5.51	25.95	206	0.27
124	6.32	33.339	4.47	26.22	125	6.31	33.35	4.45	26.23	180	0.32
149	6.18	33.595	3.92	26.44	150	6.18	33.60	3.90	26.45	159	0.36
173	6.16	33.736	3.45	26.56	175	6.12	33.74	3.47	26.56	148	0.40
198	5.74	33.764	3.75	26.63	200	5.72	33.77	3.73	26.64	141	0.44
223	5.56	33.817	3.51	26.69	250	5.60	33.92	2.56	26.77	128	0.51
248	5.62	33.922	2.58	26.77	300	5.05	33.93	2.22	26.84	122	0.57
297	5.06	33.928	2.25	26.84	400	4.63	34.01	1.29	26.96	110	0.69
386	4.68	34.001	1.36	26.94	500	4.28	34.09	0.92	27.05	102	0.80
486	4.34	34.079	0.94	27.04	600	3.91	34.15	0.78	27.14	93	0.91
586	3.93	34.136	0.83	27.13	700	3.75	34.22	0.50	27.21	87	1.00
685	3.79	34.207	0.50	27.20	800	3.50	34.27	0.52	27.28	80	1.10
785	3.53	34.262	0.53	27.27	1000	3.10	34.37	0.45	27.40	69	1.26
984	3.13	34.365	0.44	27.39	1200	2.79	34.43	0.52	27.47	62	1.41
1281	2.68	34.453	0.54	27.50	1500	2.47	34.47	0.62	27.53	56	1.61
1580	2.40	(34.480)b)	(0.64)b)	(27.54)	2000	2.00	34.51	0.75	27.60	50	1.92
2075	1.94	34.514	0.77	27.61							
2080	1.99	34.518	0.75	27.61							

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CNAV OSHAWA; August 26, 1959; 0244 GCT; 55°05'N, 135°00'W; sounding, missing; wind, 290°, 20 kt; weather, light fog; sea, rough.

0	13.70	31.834	6.33	23.83	0	13.70	31.83	6.33	23.83	408	0.00
10	13.50	31.820	6.14	23.86	10	13.50	31.82	6.14	23.86	405	0.04
20	13.20	32.152	6.07	24.17	20	13.20	32.15	6.07	24.17	376	0.08
30	12.74	32.225	6.05	24.32	30	12.74	32.22	6.05	24.32	361	0.12
49	8.33	32.486	6.08	25.28	50	8.29	32.50	6.05	25.29	269	0.18
74	7.43	32.691	5.34	25.57	75	7.40	32.70	5.31	25.58	242	0.24
99	6.82	32.918	4.55	25.83	100	6.79	32.94	4.49	25.84	217	0.30
123	6.26	33.318	3.23	26.21	125	6.25	33.34	3.24	26.23	180	0.35
148	6.12	33.574	3.29	26.43	150	6.09	33.59	3.28	26.45	159	0.40
173	5.79	33.748	3.18	26.61	175	5.78	33.76	3.16	26.62	143	0.44
197	5.67	33.843	2.95	26.70	200	5.64	33.85	2.89	26.71	134	0.47
222	5.42	33.876	2.53	26.76	250	5.20	33.91	2.11	26.81	125	0.54
247	5.22	33.908	2.13	26.81	300	4.88	33.97	1.81	26.90	116	0.60
296	4.91	33.971	1.84	26.89	400	4.35	34.01	1.37	26.99	108	0.72
381	4.38	33.995	1.44	26.97	500	4.17	34.09	0.97	27.06	101	0.83
477	4.22	34.065	1.08	27.04	600	3.98	34.17	0.68	27.15	92	0.93
572	4.03	34.147	0.69	27.13	700	3.80	34.24	0.59	27.22	86	1.02
668	3.86	34.215	0.65	27.20	800	3.58	34.29	0.48	27.28	80	1.11
763	3.68	34.272	0.48	27.26	1000	3.15	34.36	0.48	27.39	70	1.28
954	3.23	34.348	0.46	27.37	1200	2.83	34.43	0.55	27.47	62	1.43
1242	2.77	34.442	0.56	27.48	1500	2.34	34.52	0.77	27.58	52	1.62
1536	2.29	34.525	0.80	27.59	2000	1.90	34.60	1.59	27.68	42	1.90
2028	1.88	34.604	1.64	27.69							
2033	1.88	34.606	1.57	27.69							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
64	CNAV OSHAWA; August 26, 1959; 0556 GCT; 54°53'N, 134°20'W; sounding, missing; wind, 290°, 10 kt; weather, intermittent slight drizzle; sea, moderate.										
0	13.40	31.353	6.13	23.52	0	13.40	31.35	6.13	23.52	438	0.00
10	13.28	31.349	6.20	23.54	10	13.28	31.35	6.20	23.54	436	0.04
20	(13.10)a)	31.739	6.10	(23.87)	20	13.10	31.74	6.10	23.87	404	0.09
30	12.59	32.025	6.05	24.19	30	12.59	32.02	6.05	24.19	374	0.12
50	9.86	32.050	5.02	24.70	50	9.86	32.05	5.02	24.70	325	0.20
75	8.66	32.376	4.83	25.14	75	8.66	32.38	4.83	25.14	283	0.27
100	7.11	32.862	4.49	25.74	100	7.11	32.86	4.49	25.74	226	0.34
125	6.42	33.291	3.52	26.17	125	6.42	33.29	3.52	26.17	185	0.39
150	6.30	33.402	3.43	26.28	150	6.30	33.40	3.43	26.28	175	0.44
175	5.84	33.653	3.16	26.53	175	5.84	33.65	3.16	26.53	151	0.48
200	5.56	33.760	2.81	26.65	200	5.56	33.76	2.81	26.65	140	0.51
225	5.48	33.810	2.81	26.70							
65	CNAV OSHAWA; August 26, 1959; 0855 GCT; 54°36'N, 133°30'W; sounding, missing; wind, 270°, 5 kt; weather, fog; sea, smooth.										
0	11.70	31.330	6.34	23.82	0	11.70	31.33	6.34	23.82	409	0.00
10	11.24	31.457	6.00	24.00	10	11.24	31.46	6.00	24.00	392	0.04
20	10.23	31.714	5.43	24.37	20	10.23	31.74	5.43	24.37	357	0.08
30	9.78	31.906	5.21	24.60	30	9.78	31.91	5.21	24.60	335	0.11
49	9.32	32.278	5.12	24.96	50	9.25	32.30	5.10	24.99	298	0.18
74	7.86	32.819	4.64	25.60	75	7.82	32.82	4.60	25.61	239	0.24
99	7.06	32.760	3.82	25.67	100	7.03	32.79	3.81	25.69	231	0.30
124	6.36	33.344	3.58	26.22	125	6.35	33.35	3.57	26.23	180	0.36
148	6.14	33.518	3.36	26.39	150	6.12	33.53	3.34	26.40	164	0.40
173	5.86	33.688	3.04	26.56	175	5.83	33.70	3.00	26.57	148	0.44
198	5.54	33.787	2.64	26.67	200	5.52	33.79	2.62	26.68	137	0.48
222	5.34	33.844	2.41	26.74	250	5.26	33.88	2.28	26.78	128	0.54
247	5.26	33.876	2.28	26.78							
272	5.23	33.886	2.28	26.79							
66	CNAV OSHAWA; August 27, 1959; 0859 GCT; 54°14'N, 133°26'W; sounding, missing; wind, 040°, 1 kt; weather, clear; sea, smooth.										
0	12.20	31.606	6.34	23.94	0	12.20	31.61	6.34	23.94	398	0.00
9	(11.70)a)	31.676	6.63	(24.09)	10	11.65	31.74	6.56	24.14	379	0.04
18	11.34	32.121	6.09	24.50	20	11.11	32.15	6.01	24.56	339	0.08
28	10.32	32.259	5.76	24.78	30	10.07	32.30	5.73	24.85	311	0.11
46	(8.40)a)	32.547	5.62	(25.31)	50	8.22	32.59	5.60	25.37	262	0.16
69	7.48	32.762	5.49	25.61	75	7.38	32.82	5.30	25.68	232	0.23
92	7.12	32.973	4.84	25.83	100	6.97	33.09	4.64	25.94	207	0.28
115	6.71	33.293	4.30	26.14	125	6.60	33.40	4.02	26.23	180	0.33
138	6.46	33.526	3.70	26.35	150	6.22	33.59	3.48	26.43	161	0.38
161	6.02	33.640	3.30	26.50	175	5.94	33.69	3.08	26.55	149	0.42
183	(5.90)a)	33.714	2.97	(26.57)	200	5.75	33.78	2.92	26.64	141	0.45
206	5.70	33.806	2.90	26.67	250	5.42	33.87	2.46	26.75	130	0.52
229	5.58	33.828	2.60	26.70	300	5.16	33.93	2.24	26.83	123	0.59
275	5.24	33.914	2.32	26.81							
373	4.96	33.973	2.03	26.89							

a) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

CNAV OSHAWA; August 28, 1959; 1245 GCT; 54°00'N, 135°00'W; sounding, missing; wind, 350°, 5 kt; weather, clear; sea, smooth. 67

0	13.70	32.207	6.13	24.11	0	13.70	32.21	6.13	24.11	382	0.00
10	(13.90)a)	32.197	6.06	(24.07)	10	13.90	32.20	6.06	24.07	385	0.04
20	(13.10)a)	32.209	6.22	(24.24)	20	13.10	32.21	6.22	24.24	369	0.08
30	11.92	32.441	6.48	24.64	30	11.92	32.44	6.48	24.64	331	0.11
50	8.67	32.496	6.54	25.23	50	8.67	32.50	6.54	25.23	275	0.17
75	7.32	32.629	6.48	25.53	75	7.32	32.63	6.48	25.53	246	0.24
100	6.40	32.870	6.03	25.84	100	6.40	32.87	6.03	25.84	217	0.30
125	6.77	33.267	4.50	26.11	125	6.77	33.27	4.50	26.11	191	0.35
150	6.46	33.560	3.92	26.38	150	6.46	33.56	3.92	26.38	166	0.39
175	6.10	33.724	3.45	26.55	175	6.10	33.72	3.45	26.55	149	0.43
200	5.97	33.778	3.35	26.61	200	5.97	33.78	3.35	26.61	144	0.47
225	5.76	33.824	3.30	26.68	250	5.58	33.86	2.98	26.73	132	0.54
250	5.58	33.865	2.98	26.73	300	5.32	33.93	2.31	26.82	124	0.61
300	5.32	33.934	2.31	26.82	400	4.65	34.02	1.33	26.96	110	0.73
360	4.81	33.983	1.62	26.91	500	4.44	34.10	0.86	27.05	102	0.84
455	4.46	34.069	0.97	27.02	600	4.27	34.17	0.65	27.12	95	0.95
551	4.41	(34.139)b)	(0.75)b)	(27.08)	700	3.95	34.23	0.59	27.20	88	1.05
647	4.14	34.197	0.56	27.16	800	3.64	34.28	0.59	27.27	81	1.14
742	3.81	34.250	0.62	27.23	1000	3.15	34.38	0.56	27.40	69	1.30
934	3.29	34.351	0.55	27.36	1200	2.78	34.45	0.60	27.48	61	1.45
1230	2.73	34.455	0.62	27.50	1500	2.34	34.52	0.77	27.58	52	1.64
1526	2.31	34.524	0.78	27.59	2000	1.88	34.60	1.55	27.69	41	1.92
2018	1.87	34.608	1.57	27.69							
2023	1.89	34.616	1.42	27.69							

CNAV OSHAWA; August 28, 1959; 1927 GCT; 54°00'N, 137°00'W; sounding, missing; wind, missing; weather, partly cloudy; sea, smooth. 68

0	14.70	31.794	6.27	23.59	0	14.70	31.79	6.27	23.59	431	0.00
10	13.64	31.761	6.20	23.78	10	13.64	31.76	6.20	23.78	413	0.04
20	13.10	31.880	6.27	23.98	20	13.10	31.88	6.27	23.98	394	0.08
30	11.40	32.451	6.23	24.74	30	11.40	32.45	6.23	24.74	321	0.12
50	(6.90)a)	32.596	6.51	(25.56)	50	6.90	32.60	6.51	25.56	243	0.18
75	6.68	32.776	6.32	25.73	75	6.68	32.78	6.32	25.73	227	0.24
100	6.10	32.964	5.90	25.96	100	6.10	32.96	5.90	25.96	205	0.29
124	6.56	33.296	4.63	26.16	125	6.54	33.31	4.61	26.17	185	0.34
149	6.02	33.637	4.28	26.50	150	6.01	33.64	4.27	26.50	154	0.38
174	5.71	33.768	3.94	26.64	175	5.70	33.77	3.92	26.64	141	0.42
199	5.52	33.833	3.39	26.71	200	5.51	33.84	3.36	26.72	133	0.46
224	5.29	33.896	2.67	26.79	250	5.01	33.92	2.28	26.84	122	0.52
249	5.02	33.917	2.30	26.84	300	4.70	33.95	1.90	26.90	116	0.58
299	4.71	33.946	1.90	26.89	400	3.99	33.99	1.44	27.01	106	0.70
398	3.99	33.990	1.46	27.01	500	4.19	34.12	0.87	27.09	98	0.80
498	4.20	34.122	0.87	27.09	600	3.92	34.20	0.63	27.18	90	0.90
598	3.92	34.194	0.63	27.18	700	3.69	34.25	0.49	27.25	83	1.00
697	3.70	34.252	0.49	27.24	800	3.44	34.31	0.47	27.31	77	1.08
797	3.45	34.306	0.47	27.31	1000	3.07	34.39	0.43	27.41	68	1.24
996	3.08	34.390	0.43	27.41	1200	2.75	34.44	0.55	27.49	60	1.39
1295	2.61	34.466	0.59	27.52	1500	2.36	34.52	0.85	27.58	52	1.58
1594	2.25	34.540	0.95	27.60	2000	1.93	34.61	1.48	27.69	41	1.86
2093	1.86	34.624	1.59	27.70							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
69	CNAV OSHAWA; August 29, 1959; 0229 GCT; 54°00'N, 139°00'W; sounding, missing; wind, 220°, 15 kt; weather, overcast; sea, moderate.										
0	12.70	32.631	6.24	24.64	0	12.70	32.63	6.24	24.64	331	0.00
9	(13.00)a)	32.628	6.22	(24.58)	10	12.97	32.63	6.23	24.58	337	0.03
18	(12.80)a)	32.631	6.28	(24.62)	20	12.70	32.63	6.26	24.64	331	0.07
27	12.40	32.632	6.19	24.70	30	12.27	32.64	6.25	24.73	322	0.10
46	11.71	32.652	6.51	24.84	50	10.59	32.70	6.64	25.08	289	0.16
69	6.12	32.870	7.16	25.88	75	5.94	32.90	6.98	25.92	209	0.22
91	5.52	32.958	6.54	26.02	100	5.42	33.07	6.22	26.12	190	0.28
114	5.29	33.221	5.76	26.26	125	5.23	33.38	5.67	26.39	164	0.32
137	5.16	33.544	5.58	26.53	150	4.99	33.67	4.70	26.65	140	0.36
160	4.86	33.767	4.09	26.74	175	4.61	33.76	3.83	26.76	129	0.39
183	4.48	33.762	3.70	26.77	200	4.36	33.81	3.36	26.83	123	0.42
206	4.32	33.829	3.25	26.84	250	4.04	33.87	2.73	26.91	115	0.49
229	4.18	33.866	2.96	26.89	300	3.86	33.90	2.21	26.95	111	0.54
274	3.90	33.874	2.51	26.92	400	3.78	34.03	1.37	27.06	101	0.66
361	3.77	33.970	1.60	27.01	500	3.76	34.14	0.91	27.15	92	0.76
461	3.80	34.104	1.05	27.12	600	3.62	34.22	0.65	27.22	86	0.85
561	3.70	34.190	0.71	27.19	700	3.43	34.27	0.58	27.29	79	0.94
660	3.51	34.253	0.58	27.26	800	3.25	34.32	0.58	27.34	74	1.02
760	3.32	34.304	0.57	27.32	1000	2.96	34.40	0.49	27.43	66	1.18
960	3.01	34.380	0.63	27.41	1200	2.68	34.46	0.56	27.50	59	1.32
965	3.02	34.386	0.48	27.42	1500	2.33	34.51	0.72	27.57	53	1.51
1200	2.68	34.455	0.56	27.50	2000	1.96	34.58	0.95	27.66	44	1.80
1500	2.33	34.507	0.72	27.57	2500	1.73	34.64	1.93	27.73	38	2.05
2000	1.96	34.585	0.95	27.66	3000	1.59	34.67	2.96	27.76	35	2.28
2500	1.73	34.640	1.93	27.73							
3100	1.57	34.676	3.15	27.77							
3105	1.57	34.677	2.92	27.77							
70	CNAV OSHAWA; August 29, 1959; 0941 GCT; 54°02'N, 140°58'W; sounding, missing; wind, 280°, 15 kt; weather, cloudy; sea, moderate.										
0	12.60	32.567	6.36	24.61	0	12.60	32.57	6.36	24.61	334	0.00
10	12.69	32.544	6.31	24.57	10	12.69	32.54	6.31	24.57	338	0.03
20	12.70	32.546	6.26	24.57	20	12.70	32.55	6.26	24.57	338	0.07
30	12.67	32.539	6.17	24.57	30	12.67	32.54	6.17	24.57	338	0.10
50	6.63	32.813	6.94	25.77	50	6.63	32.81	6.94	25.77	223	0.16
75	(5.70)a)	32.872	6.89	(25.93)	75	5.70	32.87	6.89	25.93	208	0.21
99	5.56	33.102	5.90	26.13	100	5.55	33.12	5.86	26.14	188	0.26
124	5.38	33.450	4.98	26.43	125	5.37	33.46	4.93	26.44	160	0.31
149	5.05	33.750	3.80	26.70	150	5.05	33.75	3.77	26.70	135	0.34
174	5.13	33.841	3.21	26.76	175	5.13	33.84	3.19	26.77	128	0.38
199	5.03	33.904	2.60	26.83	200	5.02	33.90	2.59	26.83	123	0.41
223	4.80	33.914	2.26	26.86	250	4.33	33.90	2.44	26.90	116	0.47
248	4.33	33.893	2.49	26.89	300	4.36	33.99	1.51	26.96	110	0.53
298	4.37	33.984	1.52	26.96	400	4.03	34.07	1.08	27.07	100	0.64
393	4.04	34.066	1.11	27.06	500	3.92	34.17	0.69	27.16	92	0.74
492	3.93	34.162	0.71	27.15	600	3.75	34.24	0.54	27.23	85	0.84
592	3.77	34.230	0.54	27.22	700	3.54	34.29	0.56	27.29	79	0.92
691	3.56	34.290	0.56	27.29	800	3.34	34.33	0.62	27.34	74	1.01
790	3.36	34.327	0.62	27.34	1000	2.97	34.41	0.64	27.44	65	1.16
988	2.99	34.406	0.64	27.43	1200	2.66	34.46	0.67	27.51	58	1.30
1286	2.54	34.480	0.68	27.53	1500	2.32	34.53	0.80	27.59	51	1.49
1583	2.24	34.542	0.83	27.61	2000	1.92	34.61	1.44	27.69	41	1.76
2079	1.87	34.622	1.55	27.70							
2084	(1.87)b)	34.621	1.59	(27.70)							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 29, 1959; 1826 GCT; 53°54'N, 143°03'W; sounding, missing; wind, 280°, 30 kt; weather, cloudy; sea, very rough. 71

0	12.30	32.627	6.26	24.71	0	12.30	32.63	6.26	24.71	324	0.00
10	12.47	32.610	6.22	24.67	10	12.47	32.61	6.22	24.67	328	0.03
20	12.34	32.606	6.20	24.69	20	12.34	32.61	6.20	24.69	326	0.07
30	12.36	32.615	6.20	24.69	30	12.36	32.62	6.20	24.69	326	0.10
49	5.49	32.790	7.15	25.89	50	5.47	32.79	7.13	25.90	211	0.15
74	5.10	32.848	6.88	25.98	75	5.10	32.87	6.80	26.00	202	0.20
99	(5.10)a)	33.270	5.22	(26.32)	100	5.10	33.29	5.15	26.33	170	0.25
120	5.02	33.670	4.02	26.64	125	4.98	33.69	3.95	26.66	139	0.29
148	4.82	33.781	3.66	26.75	150	4.81	33.78	3.61	26.76	129	0.32
173	4.74	33.822	3.02	26.79	175	4.72	33.83	2.99	26.80	126	0.36
197	4.47	33.872	2.67	26.86	200	4.44	33.87	2.62	26.87	119	0.39
222	4.22	33.884	2.33	26.90	250	4.29	33.94	1.80	26.93	113	0.45
247	4.30	33.932	1.83	26.93	300	4.09	34.00	1.47	27.00	107	0.50
296	4.09	33.993	1.49	27.00	400	4.00	34.10	0.96	27.09	98	0.61
394	4.01	34.096	0.99	27.09	500	3.82	34.17	0.59	27.17	91	0.71
493	3.83	34.164	0.60	27.16	600	3.63	34.26	0.48	27.25	83	0.80
591	3.65	34.251	0.48	27.25	700	3.43	34.31	0.48	27.31	77	0.89
690	3.45	34.300	0.48	27.31	800	3.23	34.36	0.44	27.37	72	0.97
790	3.25	34.352	0.44	27.37	1000	2.91	34.43	0.49	27.46	63	1.12
988	2.93	34.424	0.48	27.45	1200	2.61	34.50	0.68	27.54	56	1.25
1286	2.50	34.528	0.76	27.57	1500	2.28	34.56	0.81	27.62	48	1.43
1579	2.20	34.577	0.83	27.64	2000	1.90	34.63	1.48	27.70	40	1.69
2078	1.85	34.636	1.58	27.71							
2083	1.85	34.647	1.55	27.72							

CNAV OSHAWA; August 30, 1959; 0019 GCT; 53°00'N, 143°30'W; sounding, missing; wind, 280°, 25 kt; weather, overcast; sea, very rough. 72

0	12.10	32.632	6.61	24.75	0	12.10	32.63	6.61	24.75	320	0.00
10	12.08	32.616	6.26	24.75	10	12.08	32.62	6.26	24.75	320	0.03
20	12.02	32.617	6.26	24.76	20	12.02	32.62	6.26	24.76	320	0.06
30	11.97	32.618	6.17	24.77	30	11.97	32.62	6.17	24.77	319	0.10
50	5.96	32.778	6.09	25.83	50	5.96	32.78	6.09	25.83	218	0.15
75	(4.90)a)	32.865	6.59	(26.02)	75	4.90	32.86	6.59	26.02	200	0.20
100	(5.20)a)	33.078	6.09	(26.15)	100	5.20	33.08	6.09	26.15	187	0.25
125	5.04	33.444	4.09	26.46	125	5.04	33.44	4.09	26.46	158	0.30
150	5.15	33.743	3.45	26.68	150	5.15	33.74	3.45	26.68	137	0.33
175	4.98	33.823	2.98	26.77	175	4.98	33.82	2.98	26.77	128	0.37
200	4.60	33.871	2.60	26.85	200	4.60	33.87	2.60	26.85	121	0.40
225	4.38	33.906	2.16	26.90	250	4.30	33.93	1.86	26.93	113	0.46
250	4.30	33.931	1.86	26.93	300	4.14	34.02	1.16	27.01	106	0.52
300	4.14	34.015	1.16	27.01	400	3.97	34.10	0.76	27.10	97	0.62
380	4.01	34.088	0.81	27.08	500	3.81	34.18	0.58	27.18	90	0.72
479	3.85	34.165	0.62	27.16	600	3.63	34.25	0.44	27.25	83	0.81
578	3.69	34.232	0.45	27.23	700	3.37	34.30	0.41	27.32	76	0.90
677	3.43	34.290	0.40	27.30	800	3.15	34.36	0.46	27.38	71	0.98
776	3.19	34.345	0.45	27.37	1000	2.86	34.43	0.54	27.47	62	1.12
974	2.90	34.423	0.52	27.46	1200	2.60	34.49	0.65	27.53	56	1.26
1196	2.61	34.485	0.65	27.53	1500	2.24	34.55	0.82	27.62	48	1.44
1494	2.24	34.552	0.81	27.62	2000	1.89	34.62	1.46	27.70	40	1.70
1988	1.90	34.624	1.44	27.70	2500	1.68	34.67	2.06	27.75	36	1.94
2484	1.68	34.666	2.04	27.75	3000	1.54	34.69	2.60	27.78	33	2.16
2980	1.54	34.690	2.60	27.78	3500	1.50	34.70	2.62	27.79	32	2.38
3476	1.50	34.702	2.62	27.79							
3500	(1.50)b)	(34.703)b)	(2.62)b)	(27.79)							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

73 CNAV OSHAWA; August 30, 1959; 0827 GCT; 52°01'N, 142°02'W; sounding, missing; wind, 270°, 10 kt; weather, overcast; sea, very rough.

0	12.00	32.761	6.40	24.87	0	12.00	32.76	6.40	24.87	309	0.00
10	12.10	32.742	6.31	24.84	10	12.10	32.74	6.31	24.84	312	0.03
20	12.05	32.739	6.33	24.85	20	12.05	32.74	6.33	24.85	311	0.06
30	12.06	32.748	6.27	24.85	30	12.06	32.75	6.27	24.85	311	0.09
49	8.46	32.889	6.62	25.57	50	8.32	32.89	6.63	25.60	240	0.15
74	5.57	32.998	6.91	26.05	75	5.55	33.00	6.91	26.05	197	0.20
99	5.15	32.999	6.88	26.10	100	5.16	33.01	6.82	26.11	191	0.25
124	5.33	33.339	5.72	26.34	125	5.32	33.36	5.66	26.36	167	0.30
148	5.20	33.695	4.20	26.64	150	5.17	33.70	4.19	26.65	140	0.34
173	4.84	33.796	4.11	26.76	175	4.81	33.80	4.10	26.77	128	0.37
198	4.44	33.836	3.92	26.84	200	4.42	33.84	3.88	26.84	122	0.40
223	4.18	33.824	3.43	26.86	250	4.05	33.87	2.92	26.91	115	0.47
248	4.06	33.870	2.95	26.90	300	3.82	33.91	2.40	26.96	110	0.52
297	3.82	33.902	2.43	26.95	400	3.77	34.04	1.30	27.07	100	0.63
395	3.77	34.038	1.32	27.07	500	3.68	34.16	0.88	27.17	91	0.73
494	3.69	34.153	0.90	27.17	600	3.58	34.22	0.81	27.23	85	0.82
593	3.59	34.219	0.80	27.23	700	3.43	34.29	0.90	27.30	78	0.91
693	3.45	34.290	0.92	27.30	800	3.18	34.35	0.57	27.37	72	0.99
792	3.19	34.346	0.57	27.37	1000	2.85	34.42	0.62	27.46	63	1.14
991	2.86	34.416	0.60	27.45	1200	2.58	34.49	0.80	27.54	56	1.28
1190	2.59	34.491	0.80	27.54	1500	2.31	34.54	0.80	27.60	50	1.46
1489	2.32	34.540	0.80	27.60							
1500	(2.31)a)	(34.542)a)	(0.80)a)	(27.60)							

74 CNAV OSHAWA; August 30, 1959; 1513 GCT; 52°00'N, 140°00'W; sounding, missing; wind, 280°, 12 kt; weather, cloudy; sea, moderate.

0	12.00	32.664	6.24	24.80	0	12.00	32.66	6.24	24.80	316	0.00
10	12.12	32.642	6.26	24.76	10	12.12	32.64	6.26	24.76	320	0.03
20	(11.83)b)	32.630	6.31	(24.80)	20	11.83	32.63	6.31	24.80	316	0.06
30	11.63	32.701	6.28	24.90	30	11.63	32.70	6.28	24.90	306	0.10
50	6.36	32.937	6.89	25.90	50	6.36	32.94	6.89	25.90	211	0.15
75	(5.10)c)	32.988	6.71	(26.09)	75	5.10	32.99	6.71	26.09	193	0.20
100	4.92	32.996	6.84	26.12	100	4.92	33.00	6.84	26.12	190	0.25
125	5.60	33.308	5.66	26.29	125	5.60	33.31	5.66	26.29	174	0.29
150	6.02	33.796	4.13	26.62	150	6.02	33.80	4.13	26.62	143	0.33
175	5.62	33.842	3.73	26.71	175	5.62	33.84	3.73	26.71	134	0.37
200	5.28	33.866	3.34	26.77	200	5.28	33.87	3.34	26.77	128	0.40
225	4.86	33.855	3.51	26.81	250	4.62	33.86	3.20	26.84	122	0.47
250	4.62	33.861	3.20	26.84	300	4.25	33.93	2.22	26.94	112	0.53
300	4.25	33.934	2.22	26.94	400	4.02	34.05	1.25	27.05	102	0.64
395	4.02	34.041	1.29	27.04	500	3.94	34.13	0.76	27.13	94	0.74
494	3.95	34.128	0.77	27.12	600	3.71	34.22	0.59	27.22	86	0.84
593	3.73	34.215	0.60	27.21	700	3.47	34.27	0.50	27.28	80	0.93
692	3.48	34.266	0.49	27.28	800	3.32	34.32	0.58	27.34	74	1.01
791	3.34	34.320	0.58	27.33	1000	2.95	34.40	0.58	27.43	66	1.17
990	2.96	34.392	0.58	27.43	1200	2.69	34.45	0.66	27.49	60	1.31
1289	2.59	34.466	0.68	27.52	1500	2.33	34.54	0.78	27.60	50	1.50
1587	2.24	34.564	0.83	27.62	2000	1.97	34.61	1.34	27.68	42	1.77
2386	1.77	34.647	1.75	27.73	2500	1.72	34.66	1.85	27.74	37	2.02
2500	(1.72)a)	(34.657)a)	(1.85)a)	(27.74)							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated by two-point logarithmic method.
c) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; August 30, 1959; 2053 GCT; 51°57'N, 138°00'W; sounding, missing; wind, 300°, 10 kt; weather, cloudy; sea, moderate. 75

0	13.40	32.465	6.27	24.37	0	13.40	32.46	6.27	24.37	357	0.00
10	13.36	32.440	6.29	24.36	10	13.36	32.44	6.29	24.36	358	0.04
20	13.18	32.460	6.26	24.41	20	13.18	32.46	6.26	24.41	353	0.07
30	13.12	32.469	6.26	24.43	30	13.12	32.47	6.26	24.43	351	0.11
49	10.70	32.736	6.63	25.09	50	10.50	32.74	6.65	25.13	284	0.17
74	6.58	32.891	7.08	25.84	75	6.55	32.90	7.06	25.84	217	0.24
99	5.94	32.997	6.70	26.00	100	5.94	33.01	6.66	26.01	201	0.29
124	6.04	33.266	5.82	26.20	125	6.03	33.28	5.78	26.21	182	0.34
148	5.92	33.600	4.86	26.48	150	5.91	33.61	4.83	26.49	155	0.38
173	5.76	33.768	4.46	26.63	175	5.73	33.77	4.42	26.64	141	0.42
198	5.38	33.841	4.05	26.73	200	5.35	33.84	4.04	26.74	131	0.45
223	5.02	33.851	3.94	26.78	250	4.63	33.86	3.26	26.83	123	0.52
248	4.63	33.854	3.32	26.83	300	4.54	33.94	1.94	26.91	115	0.58
297	4.56	33.938	1.96	26.91	400	4.10	34.03	1.39	27.03	104	0.69
396	4.11	34.026	1.41	27.02	500	3.92	34.13	0.96	27.12	95	0.80
496	3.92	34.127	0.97	27.12	600	3.87	34.19	0.75	27.18	90	0.89
595	3.88	34.187	0.76	27.17	700	3.63	34.26	0.60	27.26	82	0.99
694	3.65	34.261	0.60	27.26	800	3.38	34.31	0.56	27.32	76	1.07
793	3.39	34.304	0.56	27.32	1000	3.01	34.41	0.56	27.43	66	1.23
993	3.02	34.405	0.56	27.43	1200	2.69	34.47	0.56	27.51	58	1.37
1192	2.70	34.468	0.56	27.51	1500	2.33	34.54	0.62	27.60	50	1.56
1490	2.34	34.534	0.62	27.59							
1988	1.96u	34.472u	0.69	27.57							
2000	(1.95)a)	(34.471)a)	(0.69)a)	(27.57)							

CNAV OSHAWA; August 31, 1959; 0518 GCT; 52°01'N, 136°00'W; sounding, missing; wind, 300°, 5 kt; weather, cloudy; sea, slight. 76

0	13.60	32.336	6.08	24.23	0	13.60	32.34	6.08	24.23	370	0.00
10	13.78	32.318	6.17	24.18	10	13.78	32.32	6.17	24.18	375	0.04
20	13.74	32.317	6.18	24.19	20	13.74	32.32	6.18	24.19	374	0.08
30	13.64	32.330	6.16	24.22	30	13.64	32.33	6.16	24.22	371	0.11
49	8.30	32.650	6.91	25.41	50	8.22	32.66	6.89	25.42	257	0.18
74	(6.70)b)	32.779	6.55	(25.73)	75	6.67	32.78	6.54	25.74	226	0.24
99	6.02	32.917	6.41	25.93	100	6.04	32.94	6.33	25.94	207	0.29
124	6.38	33.383	4.74	26.25	125	6.38	33.40	4.69	26.26	177	0.34
148	6.46	33.700	3.81	26.49	150	6.44	33.71	3.77	26.50	149	0.38
173	6.26	33.804	3.40	26.60	175	6.22	33.81	3.39	26.61	144	0.42
198	5.84	33.860	3.29	26.69	200	5.83	33.87	3.26	26.70	135	0.46
223	5.73	33.930	2.83	26.76	250	5.46	33.95	2.54	26.81	125	0.52
252	5.44	33.954	2.52	26.82	300	4.58	33.90	2.63	26.88	118	0.59
295	4.61	33.901	2.68	26.87	400	4.08	33.98	1.79	26.99	108	0.70
398	4.08	33.976	1.81	26.99	500	4.26	34.13	0.87	27.09	98	0.81
498	4.27	34.130	0.87	27.09	600	3.99	34.20	0.77	27.18	90	0.91
597	4.00	34.201	0.77	27.17	700	3.74	34.25	0.73	27.24	84	1.00
697	3.75	34.248	0.73	27.24	800	3.49	34.31	0.56	27.31	77	1.09
796	3.50	34.310	0.56	27.31	1000	3.11	34.40	0.50	27.42	67	1.25
995	3.12	34.397	0.50	27.41	1200	2.76	34.46	0.54	27.50	59	1.39
1293	2.62	34.487	0.55	27.53	1500	2.34	34.53	0.54	27.59	51	1.58
1593	2.23	34.544	0.53	27.61	2000	1.90	34.62	1.40	27.69	41	1.86
2092	1.84	34.632	1.57	27.71							
2097	1.84	34.630	1.65	27.71							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.

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CNAV OSHAWA; August 31, 1959; 1149 GCT; 52°00'N, 134°00'W; sounding, missing; wind, 300°, 15 kt; weather, clear; sea, moderate.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	13.80	32.370	6.07	24.22	0	13.80	32.37	6.07	24.22	371	0.00
10	14.12	32.348	6.15	24.14	10	14.12	32.35	6.15	24.14	379	0.04
19	14.08	32.347	6.08	24.14	20	14.08	32.35	6.08	24.14	379	0.08
29	14.09	32.343	6.06	24.14	30	13.79	32.36	6.12	24.21	372	0.11
48	9.42	32.571	7.01	25.17	50	9.21	32.58	6.96	25.22	276	0.18
73	(7.20)a)	32.697	6.42	(25.60)	75	7.16	32.73	6.33	25.63	237	0.24
97	6.74	33.060	5.43	25.95	100	6.71	33.12	5.29	26.00	202	0.30
121	6.54	33.482	4.39	26.31	125	6.52	33.52	4.32	26.34	169	0.35
146	6.40	33.715	3.99	26.51	150	6.33	33.73	3.95	26.53	151	0.39
170	6.00	33.798	3.79	26.63	175	5.93	33.81	3.72	26.65	140	0.42
194	5.68	33.864	3.49	26.72	200	5.62	33.87	3.42	26.73	132	0.46
218	5.44	33.897	3.19	26.77	250	5.42	33.94	2.71	26.80	126	0.52
243	5.44	33.934	2.76	26.80	300	5.28	33.95	2.32	26.84	122	0.59
291	5.32	33.941	2.46	26.82	400	4.89	34.08	1.09	26.98	109	0.71
382	4.99	34.060	1.14	26.95	500	4.41	34.15	0.88	27.09	98	0.82
478	4.52	34.132	0.85	27.06	600	4.01	34.21	0.87	27.18	90	0.92
573	4.09	34.192	1.01	27.16	700	3.77	34.26	0.49	27.25	83	1.01
669	3.82	34.247	0.55	27.23	800	3.58	34.31	0.40	27.30	78	1.10
764	3.66	34.295	0.38	27.28	1000	3.16	34.40	0.47	27.41	68	1.26
956	3.25	34.380	0.47	27.39	1200	2.79	34.46	0.53	27.49	60	1.40
1148	2.87	34.446	0.49	27.48	1500	2.39	34.53	0.75	27.58	52	1.60
1445	2.45	34.517	0.66	27.57	2000	1.96	34.61	1.46	27.68	42	1.88
1991	1.97	34.606	1.44	27.68							
2000	(1.96)b)	(34.607)b)	(1.46)b)	(27.68)							

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CNAV OSHAWA; August 31, 1959; 1840 GCT; 52°00'N, 132°00'W; sounding, missing; wind, 320°, 5 kt; weather, cloudy; sea, slight.

0	14.00	32.023	6.00	23.91	0	14.00	32.02	6.00	23.91	400	0.00
10	13.97	32.002	6.01	23.90	10	13.97	32.00	6.01	23.90	402	0.04
20	13.84	32.033	(6.15)c)	23.95	20	13.84	32.03	6.15	23.95	397	0.08
30	11.88	(32.116)c)	6.25	(24.40)	30	11.88	32.12	6.25	24.40	354	0.12
50	10.54	32.232	5.24	24.72	50	10.54	32.23	5.24	24.72	323	0.19
75	9.22	32.477	5.42	25.13	75	9.22	32.48	5.42	25.13	284	0.26
100	8.24	32.726	4.87	25.48	100	8.24	32.73	4.87	25.48	251	0.33
125	7.60	33.020	4.46	25.80	125	7.60	33.02	4.46	25.80	221	0.39
150	7.11	33.319	3.96	26.10	150	7.11	33.32	3.96	26.10	192	0.44
175	6.72	33.603	3.51	26.38	175	6.72	33.60	3.51	26.38	166	0.49
200	6.29	33.835	3.02	26.62	200	6.29	33.84	3.02	26.62	143	0.53
225	6.00	33.899	2.91	26.70	250	5.75	33.93	2.78	26.76	129	0.60
250	5.75	33.933	2.78	26.76	300	5.48	33.97	2.17	26.82	124	0.66
300	5.48	33.967	2.17	26.82	400	4.93	34.03	1.53	26.94	112	0.79
399	4.93	34.030	1.55	26.94	500	4.59	34.11	0.91	27.04	103	0.90
499	4.59	34.111	0.91	27.04	600	4.27	34.19	0.53	27.14	93	1.00
599	4.27	34.192	0.53	27.14	700	3.99	34.26	0.62	27.22	86	1.10
698	4.00	34.264	0.63	27.22	800	3.73	34.32	0.36	27.29	79	1.19
798	3.74	34.316	0.36	27.29	1000	3.29	34.38	0.43	27.38	71	1.36
998	3.29	34.376	0.43	27.38	1200	2.92	34.42	0.55	27.45	64	1.51
1297	2.76	34.441	0.60	27.48	1500	2.45	34.51	0.77	27.57	53	1.71
1597	2.31	34.542	0.85	27.60	2000	1.94	34.61	1.49	27.69	41	1.99
2097	1.86	34.627	1.62	27.71							
2102	1.88	34.623	1.66	27.70							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.
c) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

CNAV OSHAWA; August 31, 1959; 2241 GCT; 51°31'N, 131°05'W; sounding, missing; wind, 210°, 5 kt; weather, cloudy; sea, missing. 79

0	14.60	31.818	6.06	23.63	0	14.60	31.82	6.06	23.63	427	0.00
10	14.86	31.809	6.05	23.57	10	14.86	31.81	6.05	23.57	433	0.04
20	14.68	31.816	6.09	23.61	20	14.68	31.82	6.09	23.61	429	0.09
29	13.38	32.021	6.17	24.04	30	13.13	32.05	6.13	24.11	382	0.13
49	9.28	32.506	5.44	25.15	50	9.20	32.52	5.44	25.17	280	0.19
73	7.69	32.786	5.35	25.60	75	7.64	32.83	5.28	25.64	236	0.26
98	7.17	33.259	4.55	26.05	100	7.14	33.28	4.51	26.07	195	0.31
122	6.89	33.479	4.21	26.26	125	6.86	33.51	4.13	26.28	175	0.36
147	6.66	33.695	3.63	26.46	150	6.63	33.71	3.62	26.48	156	0.40
171	6.42	33.828	3.53	26.60	175	6.40	33.84	3.49	26.60	145	0.44
195	6.30	33.876	3.34	26.65	200	6.24	33.88	3.26	26.66	139	0.48
220	6.02	33.917	2.96	26.72	250	5.80	33.94	2.80	26.76	129	0.55
244	5.85	33.930	2.92	26.75	300	5.39	33.98	2.03	26.84	122	0.61
282	5.55	33.966	2.22	26.81	400	4.73	34.06	1.21	26.98	109	0.73
376	4.81	34.030	1.36	26.95	500	4.46	34.15	0.73	27.08	99	0.84
471	4.53	34.124	0.81	27.06	600	4.20	34.22	0.54	27.17	91	0.94
565	4.31	34.196	0.56	27.14	700	3.94	34.30	0.43	27.25	83	1.04
660	4.02	34.258	0.49	27.22	800	3.72	34.36	0.36	27.33	75	1.12
754	3.84	34.345	0.34	27.30	1000	3.27	34.41	0.40	27.41	68	1.28
946	3.37	34.391	0.40	27.39	1200	2.90	34.47	0.47	27.50	59	1.43
1140	3.03	34.455	0.41	27.47	1500	2.37	34.55	0.80	27.60	50	1.62
1432	2.45	34.537	0.66	27.59	2000	1.88	34.63	1.64	27.71	39	1.88
1920	1.95	34.618	1.51	27.69							
2000	(1.88)a)	(34.629)a)	(1.64)a)	(27.71)							

CNAV OSHAWA; September 1, 1959; 0313 GCT; 50°57'N, 130°37'W; sounding, missing; wind, 220°, 5 kt; weather, cloudy; sea, smooth. 80

0	14.80	31.730	6.13	23.52	0	14.80	31.73	6.13	23.52	438	0.00
10	14.69	31.704	6.13	23.52	10	14.69	31.70	6.13	23.52	438	0.04
20	14.55	31.702	6.20	23.55	20	14.55	31.70	6.20	23.55	435	0.09
30	12.08	31.987	5.76	24.26	30	12.08	31.99	5.76	24.26	367	0.13
50	8.86	32.468	5.13	25.18	50	8.86	32.47	5.13	25.18	280	0.19
75	(7.70)b)	32.732	5.82	(25.56)	75	7.70	32.73	5.82	25.56	243	0.26
100	7.18	33.114	5.02	25.93	100	7.18	33.11	5.02	25.93	208	0.32
124	6.84	33.465	4.54	26.25	125	6.83	33.48	4.52	26.26	177	0.36
149	6.64	33.700	4.31	26.47	150	6.63	33.70	4.30	26.47	157	0.41
174	6.46	33.771	3.96	26.55	175	6.45	33.77	3.98	26.55	149	0.45
199	6.30	33.847	4.26	26.63	200	6.28	33.85	4.24	26.63	142	0.48
224	5.89	33.874	3.94	26.70	250	5.69	33.91	3.37	26.75	130	0.55
248	5.71	(33.904)c)	(3.42)c)	(26.74)	300	5.25	33.96	2.42	26.84	122	0.62
300	5.25	33.959	2.42	26.84	400	4.92	34.06	1.27	26.96	110	0.74
400	4.92	34.056	1.27	26.96	500	4.49	34.13	0.81	27.07	100	0.85
500	4.49	34.131	0.81	27.07	600	4.19	34.19	0.59	27.15	92	0.96
600	4.19	34.193	0.59	27.15	700	3.97	34.28	0.49	27.24	84	1.05
700	3.97	34.280	0.49	27.24	800	3.79	34.32	0.36	27.29	79	1.14
800	3.79	34.322	0.36	27.29	1000	3.31	34.40	0.43	27.40	69	1.30
1000	3.31	34.400	0.43	27.40	1200	2.90	34.46	0.68	27.48	61	1.45
1200	2.90	34.459	0.68	27.48	1500	2.41	34.53	0.86	27.59	51	1.64
1500	2.41	34.533	0.86	27.59	2000	2.00	34.60	1.27	27.67	43	1.93
2000	2.00	34.597	1.27	27.67							
2005	2.00	34.597	1.30	27.67							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.
c) Value interpolated by two-point logarithmic method.

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CNAV OSHAWA; September 1, 1959; 0715 GCT; 50°34'N, 129°29'W; sounding, missing; wind, calm; weather, cloudy; sea, missing.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
0	13.90	32.168	5.96	24.04	0	13.90	32.17	5.96	24.04	388	0.00
10	14.88	32.124	6.22	23.81	10	14.88	32.12	6.22	23.81	410	0.04
20	14.33	32.416	6.22	24.15	20	14.33	32.42	6.22	24.15	378	0.08
30	11.52	32.585	6.64	24.83	30	11.52	32.58	6.64	24.83	313	0.12
50	8.68	32.670	6.75	25.37	50	8.68	32.67	6.75	25.37	262	0.17
75	(7.50)a)	32.815	6.52	(25.65)	75	7.50	32.82	6.52	25.65	235	0.24
100	7.00	33.347	5.12	26.14	100	7.00	33.35	5.12	26.14	188	0.29
125	6.67	33.666	4.91	26.43	125	6.67	33.67	4.91	26.43	161	0.33
150	6.34	33.794	4.56	26.58	150	6.34	33.79	4.56	26.58	146	0.37
174	6.12	33.849	4.36	26.65	175	6.11	33.85	4.36	26.65	140	0.41
199	5.97	33.848	4.26	26.67	200	5.96	33.85	4.23	26.67	138	0.44
224	5.74	33.882	3.81	26.72	250	5.53	33.90	3.16	26.77	128	0.51
249	5.54	33.903	3.18	26.76	300	5.08	33.96	2.30	26.87	119	0.58
299	5.09	33.962	2.31	26.86	400	4.58	34.03	1.40	26.98	109	0.70
397	4.59	34.030	1.42	26.97	500	4.38	34.11	0.90	27.06	101	0.81
496	4.39	34.107	0.91	27.06	600	4.24	34.18	0.74	27.13	94	0.91
596	4.25	(34.181)b)	(0.74)b)	(27.13)	700	4.02	34.25	0.59	27.21	87	1.01
695	4.03	34.244	0.60	27.20	800	3.86	34.31	0.38	27.28	80	1.10
794	3.87	34.311	0.38	27.27	1000	3.47	34.39	0.48	27.38	71	1.27
993	3.49	34.391	0.48	27.38	1200	2.98	34.47	0.59	27.48	61	1.42
1292	2.78	34.498	0.64	27.53	1500	2.43	34.54	0.86	27.59	51	1.61
1590	2.29	34.561	0.95	27.62							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	$\dot{o}_T$	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV WHITETHROAT; August 4, 1959; 0758 GCT;[a] 48°17'N, 126°22'W; sounding, 1050 fm; wind, 300°, 5 kt; weather, intermittent slight drizzle; sea, slight. 1

0	13.70	32.218	6.22	24.12	0	13.70	32.22	6.22	24.12	380b)	0.00
10	13.34	32.180	6.31	24.17	10	13.34	32.18	6.31	24.17	376	0.04
20	13.26	32.174	6.29	24.18	20	13.26	32.17	6.29	24.18	375	0.08
30	11.14	32.298	6.65	24.67	30	11.14	32.30	6.65	24.67	328	0.11
50	8.54	32.518	6.46	25.27	50	8.54	32.52	6.46	25.27	242	0.17
75	7.66	32.982	5.02	25.76	75	7.66	32.98	5.02	25.76	224	0.23
100	7.36	33.370	4.26	26.11	100	7.36	33.37	4.26	26.11	191	0.29
125	7.09	33.650	3.83	26.37	125	7.09	33.65	3.83	26.37	166	0.33
150	6.99	33.789	3.37	26.49	150	6.99	33.79	3.37	26.49	155	0.37
175	6.58	33.868	3.04	26.61	175	6.58	33.87	3.04	26.61	144	0.41
200	6.57	33.931	2.62	26.66	200	6.57	33.93	2.62	26.66	139	0.45
225	6.46	33.964	2.45	26.70	250	6.23	33.98	2.21	26.74	131	0.52
300	5.83	34.012	1.79	26.82	300	5.83	34.01	1.79	26.82	124	0.58
400	5.44	34.098	1.06	26.93	400	5.44	34.10	1.06	26.93	113	0.71
500	4.74	34.109	1.28	27.02	500	4.74	34.11	1.28	27.02	105	0.82
600	4.56	34.202	0.45	27.11	600	4.56	34.20	0.45	27.11	96	0.93
800	3.91	34.321	0.29	27.28	700	4.21	34.27	0.37	27.20	88	1.03
1000	3.45	34.415	0.34	27.40	800	3.91	34.32	0.29	27.28	80	1.12
1250	3.06	34.469	0.44	27.48	1000	3.45	34.42	0.34	27.40	69	1.29
1500	2.54	34.536	0.74	27.58	1200	3.13	34.46	0.41	27.46	63	1.44
					1500	2.54	34.54	0.74	27.58	52	1.64

CNAV WHITETHROAT; August 4, 1959; 1333 GCT; 48°14'N, 127°00'W; sounding, 1400 fm; wind, 300°, 6 kt; weather, cloudy; sea, moderate. 2

0	13.80	32.212	6.12	24.10	0	13.80	32.21	6.12	24.10	382	0.00
10	13.51	32.221	5.99	24.16	10	13.51	32.22	5.99	24.16	377	0.04
20	13.61	32.222	5.88	24.14	20	13.61	32.22	5.88	24.14	379	0.08
30	(11.53)c)	32.293	6.04	(24.60)	30	11.53	32.29	6.04	24.60	335	0.11
50	8.60	32.516	5.81	25.26	50	8.60	32.52	5.81	25.26	272	0.17
75	(7.90)d)	32.837	5.12	(25.61)	75	7.90	32.84	5.12	25.61	239	0.24
100	7.70	33.385	4.02	26.07	100	7.70	33.38	4.02	26.07	195	0.29
125	7.57	33.640	2.92	26.29	125	7.57	33.64	2.92	26.29	174	0.34
150	7.48	33.814	2.99	26.44	150	7.48	33.81	2.99	26.44	160	0.38
175	7.22	33.864	2.84	26.52	175	7.22	33.86	2.84	26.52	152	0.42
200	7.03	33.921	2.60	26.59	200	7.03	33.92	2.60	26.59	146	0.46
225	6.77	33.949	2.34	26.64	250	6.43	33.96	2.16	26.70	135	0.53
300	5.85	33.979	1.86	26.79	300	5.85	33.98	1.86	26.79	127	0.60
382	5.59	34.063	1.13	26.89	400	5.55	34.07	1.09	26.90	116	0.73
479	(5.37)d)	(34.100)d)	(0.88)c)	(26.94)	500	5.31	34.11	0.84	26.95	111	0.85
575	5.13	34.135	0.69	27.00	600	5.07	34.14	0.66	27.01	106	0.96
768	4.75	34.175	0.47	27.07	700	4.87	34.16	0.54	27.05	102	1.08
960	3.74	(34.360)d)	(0.46)c)	(27.33)	800	4.57	34.21	0.47	27.12	95	1.18
1205	3.04	34.465	0.45	27.48	1000	3.61	34.38	0.46	27.35	74	1.37
1442	2.52	34.516	0.81	27.56	1200	3.05	34.46	0.45	27.47	62	1.52
1934	1.94	34.588	1.18	27.67	1500	2.44	34.53	0.85	27.58	52	1.72
2000	(1.87)e)	(34.596)e)	(1.22)e)	(27.68)	2000	1.87	34.60	1.22	27.68	42	2.00

a) Although not indicated in the tabulation, two casts were made at each station, the first to a depth of 300 meters and the second to a maximum depth of 2000 (2100) meters. At 20 stations an additional third cast was made to a maximum depth of 4000 (4100) meters. The time reported is the time of the messenger release of the shallow cast. The second and third casts were generally made about 45 and 120 minutes later, respectively.

b) Values of thermosteric anomaly were computed by the Data Collecting and Processing Group of Scripps Institution.

c) Value interpolated by two-point logarithmic method.

d) Value interpolated graphically.

e) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
3	CNAV WHITETHROAT; August 4, 1959; 2245 GCT; 48°06'N, 128°28'W; sounding, missing; wind, 290°, 8 kt; weather, cloudy; sea, slight.										
0	15.20	32.500	5.91	24.03	0	15.20	32.50	5.91	24.03	389	0.00
10	14.84	32.444	6.05	24.06	10	14.84	32.44	6.05	24.06	386	0.04
20	14.81	32.448	6.04	24.07	20	14.81	32.45	6.04	24.07	385	0.08
30	14.77	32.452	6.04	24.08	30	14.77	32.45	6.04	24.08	384	0.12
49	10.98	32.535	6.98	24.88	50	10.86	32.54	6.97	24.91	305	0.19
74	8.48	32.594	6.72	25.34	75	8.44	32.60	6.72	25.34	264	0.26
98	7.61	32.612	6.63	25.48	100	7.59	32.66	6.48	25.52	247	0.32
123	7.35	33.159	5.03	25.94	125	7.33	33.19	4.98	25.97	204	0.38
147	7.10	33.463	4.48	26.22	150	7.07	33.49	4.40	26.24	179	0.43
172	6.85	33.694	3.83	26.43	175	6.84	33.72	3.75	26.45	159	0.47
196	6.81	33.850	3.21	26.56	200	6.81	33.87	2.88	26.57	148	0.51
221	6.80	33.948	1.19	26.64	250	6.51	33.97	1.48	26.69	136	0.58
295	6.12	33.996	1.86	26.77	300	6.07	34.00	1.85	26.77	128	0.65
397	5.17	34.006	1.66	26.89	400	5.15	34.01	1.64	26.89	117	0.78
496	4.64	34.071	1.12	27.00	500	4.63	34.08	1.11	27.01	106	0.90
596	4.48	34.180	0.75	27.11	600	4.47	34.18	0.74	27.11	96	1.00
795	3.93	34.312	0.32	27.27	700	4.17	34.25	0.52	27.20	88	1.10
994	3.43	(34.390)a)	0.36	(27.38)	800	3.92	34.31	0.32	27.27	81	1.20
1243	2.94	34.452	0.50	27.48	1000	3.42	34.39	0.36	27.38	71	1.36
1492	2.49	34.553	0.81	27.60	1200	3.02	34.44	0.48	27.46	63	1.52
1500	(2.48)b)	(34.556)b)	(0.82)b)	(27.60)	1500	2.48	34.56	0.82	27.60	50	1.71
4	CNAV WHITETHROAT; August 5, 1959; 0735 GCT; 48°00'N, 129°58'W; sounding, 1350 fm; wind, 290°, 9 kt; weather, partly cloudy; sea, slight.										
0	14.70	32.546	5.91	24.17	0	14.70	32.55	5.91	24.17	376	0.00
10	14.56	32.480	5.94	24.15	10	14.56	32.48	5.94	24.15	378	0.04
20	14.61	32.482	5.78	24.14	20	14.61	32.48	5.78	24.14	379	0.08
30	14.55	32.490	5.92	24.16	30	14.55	32.49	5.92	24.16	377	0.11
49	11.02	32.550	6.48	24.89	50	10.90	32.55	6.46	24.91	305	0.18
73	8.51	32.615	6.00	25.35	75	8.46	32.64	5.97	25.38	260	0.25
98	7.95	32.874	5.61	25.64	100	7.93	32.91	5.48	25.67	233	0.32
123	7.70	33.274	4.08	25.98	125	7.70	33.31	4.03	26.01	201	0.37
147	7.72	33.654	3.58	26.28	150	7.68	33.68	3.53	26.30	173	0.42
172	7.40	33.839	3.12	26.47	175	7.37	33.85	3.09	26.48	156	0.46
200	(7.10)a)	(33.915)a)	(2.84)c)	(26.57)	200	7.10	33.92	2.84	26.57	148	0.50
244	6.60	33.955	2.48	26.67	250	6.54	33.96	2.42	26.68	137	0.57
388	5.40	34.028	1.41	26.88	300	6.07	33.99	2.00	26.77	128	0.64
486	4.84	34.076	1.03	26.98	400	5.32	34.03	1.36	26.89	117	0.77
583	4.49	34.162	0.59	27.09	500	4.79	34.09	0.96	27.00	107	0.89
778	3.94	34.271	0.45	27.23	600	4.44	34.17	0.58	27.10	97	1.00
972	3.44	34.376	0.38	27.37	700	4.14	34.23	0.50	27.18	90	1.10
1214	3.06	34.424	0.53	27.44	800	3.88	34.28	0.44	27.25	83	1.19
1459	2.60	34.502	0.64	27.55	1000	3.39	34.38	0.40	27.38	71	1.36
1948	1.96	34.658	1.32	27.72	1200	3.08	34.42	0.52	27.44	65	1.51
2000	(1.87)d)	(34.675)d)	(1.39)b)	(27.74)	1500	2.54	34.52	0.71	27.56	54	1.72
					2000	1.87	34.68	1.39	27.74	37	1.99

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.
c) Value interpolated by two-point logarithmic method.
d) Value extrapolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV WHITETHROAT; August 5, 1959; 1824 GCT; 48°00'N, 132°00'W; sounding, 1050 fm; wind, 240°, 19 kt; weather, fog; sea, slight. 5

0	14.80	32.785	5.99	24.33	0	14.80	32.78	5.99	24.33	360	0.00
10	14.20	32.700	5.80	24.39	10	14.20	32.70	5.80	24.39	355	0.04
19	14.24	32.690	5.96	24.38	20	14.20	32.69	5.96	24.38	356	0.07
28	13.90	32.694	5.99	24.45	30	13.53	32.70	6.06	24.53	341	0.11
47	10.98	32.718	6.55	25.03	50	10.68	32.72	6.55	25.08	289	0.17
71	8.93	32.751	6.55	25.39	75	8.75	32.76	6.51	25.43	256	0.24
94	7.98	32.815	6.29	25.58	100	7.83	32.84	6.29	25.63	237	0.30
119	7.42	32.927	6.29	25.75	125	7.43	33.02	6.08	25.82	219	0.36
142	7.47	33.264	5.53	26.01	150	7.39	33.37	5.36	26.10	192	0.41
166	7.24	33.562	5.06	26.28	175	7.13	33.64	4.95	26.36	167	0.46
190	6.96	33.774	4.77	26.48	200	6.86	33.81	4.65	26.52	152	0.50
214	6.72	33.850	4.48	26.57	250	6.38	33.88	4.05	26.64	141	0.57
286	6.08	33.914	3.68	26.71	300	5.89	33.92	3.42	26.73	132	0.64
395	4.78	33.950	1.84	26.89	400	4.75	33.96	1.80	26.90	116	0.77
494	4.26	34.059	1.22	27.03	500	4.25	34.06	1.18	27.04	103	0.89
593	4.14	34.154	0.59	27.12	600	4.12	34.16	0.58	27.13	94	0.99
792	3.72	34.309	0.37	27.29	700	3.90	34.24	0.47	27.22	86	1.09
990	3.40	(34.370)	0.40	(27.37)	800	3.71	34.31	0.37	27.29	79	1.18
1093	3.00	34.407	0.38	27.43	1000	3.36	(34.37)	0.40	(27.37)	(72)	(1.35)
1223	2.74	34.444	0.45	27.49	1200	2.78	34.44	0.44	27.48	61	(1.50)

CNAV WHITETHROAT; August 6, 1959; 0622 GCT; 48°04'N, 134°03'W; sounding, 2050 fm; wind, 220°, 14 kt; weather, fog; sea, slight. 6

0	14.50	32.755	5.79	24.37	0	14.50	32.76	5.79	24.37	357	0.00
10	14.40	32.734	5.89	24.38	10	14.40	32.73	5.89	24.38	356	0.04
20	14.45	32.733	5.98	24.36	20	14.45	32.73	5.98	24.36	358	0.07
30	14.30	32.727	5.94	24.39	30	14.30	32.73	5.94	24.39	355	0.11
50	10.72	32.720	6.05	25.07	50	10.72	32.72	6.05	25.07	290	0.17
75	7.76	32.827	6.18	25.63	75	7.76	32.83	6.18	25.63	237	0.24
100	7.36	32.901	6.12	25.74	100	7.36	32.90	6.12	25.74	226	0.30
125	7.14	33.239	5.49	26.04	125	7.14	33.24	5.49	26.04	198	0.35
150	6.74	33.556	5.11	26.34	150	6.74	33.56	5.11	26.34	169	0.40
175	6.45	33.758	4.80	26.54	175	6.45	33.76	4.80	26.54	150	0.44
200	6.44	33.850	4.64	26.61	200	6.44	33.85	4.64	26.61	144	0.48
225	5.96	33.863	4.03	26.68	250	5.71	33.88	3.71	26.72	133	0.55
300	5.28	33.896	3.15	26.79	300	5.28	33.90	3.15	26.79	127	0.62
396	4.56	33.994	1.71	26.95	400	4.54	34.00	1.68	26.95	111	0.74
496	4.20	34.088	0.96	27.06	500	4.19	34.09	0.85	27.07	100	0.85
595	3.88	34.148	0.72	27.14	600	3.87	34.15	0.71	27.15	92	0.95
794	3.48	34.280	0.41	27.29	700	3.65	34.22	0.55	27.22	86	1.05
993	3.04	34.375	0.38	27.40	800	3.47	34.28	0.41	27.29	79	1.14
1242	2.74	34.452	0.36	27.49	1000	3.03	34.38	0.38	27.41	68	1.30
1490	2.41	34.508	0.68	27.57	1200	2.79	34.44	0.36	27.48	61	1.44
1988	1.93	34.593	1.30	27.67	1500	2.40	34.51	0.69	27.57	53	1.64
2000	(1.92)a)	(34.595)a)	(1.31)a)	(27.68)	2000	1.92	34.60	1.31	27.68	42	1.92

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
7	CNAV WHITETHROAT; August 6, 1959; 1838 GCT; 48°08'N, 136°02'W; sounding, 2075 fm; wind, 240°, 16 kt; weather, fog; sea, rough.										
0	14.20	32.808	5.96	24.47	0	14.20	32.81	5.96	24.47	347	0.00
10	13.90	32.727	5.96	24.47	10	13.90	32.73	5.96	24.47	347	0.04
19	13.28	32.762	6.04	24.63	20	13.15	32.77	6.06	24.66	329	0.07
28	12.28	32.805	6.24	24.85	30	11.99	32.81	6.28	24.91	305	0.10
48	9.88	32.832	6.56	25.30	50	9.67	32.84	6.57	25.34	264	0.16
72	7.76	32.869	6.71	25.66	75	7.67	32.88	6.66	25.68	232	0.22
96	7.10	32.977	6.41	25.84	100	7.00	32.99	6.38	25.86	215	0.28
120	6.57	33.066	6.28	25.98	125	6.63	33.18	6.04	26.06	196	0.33
144	6.82	33.569	5.15	26.34	150	6.71	33.60	5.08	26.38	166	0.38
169	6.40	33.712	4.89	26.51	175	6.29	33.74	4.82	26.54	150	0.42
193	5.98	33.803	4.60	26.63	200	5.89	33.82	4.47	26.65	140	0.45
217	5.69	33.844	4.17	26.70	250	5.33	33.86	3.55	26.76	129	0.52
290	4.96	33.888	2.89	26.82	300	4.88	33.89	2.78	26.83	123	0.59
383	4.32	33.941	1.98	26.93	400	4.29	33.96	1.84	26.95	111	0.71
479	4.18	34.051	1.21	27.04	500	4.11	34.07	1.15	27.06	101	0.82
575	3.90	(34.139)a)	0.96	(27.13)	600	3.84	34.16	0.88	27.16	92	0.92
766	3.48	34.278	0.47	27.29	700	3.61	34.23	0.63	27.24	84	1.02
958	3.14	(34.360)b)	(0.47)a)	(27.38)	800	3.41	34.29	0.47	27.31	77	1.10
1198	2.78	34.450	0.46	27.49	1000	3.07	34.38	0.46	27.40	69	1.26
1438	2.40	34.504	0.71	27.56	1200	2.78	34.45	0.46	27.49	60	1.41
1931	1.96	34.598	1.30	27.67	1500	2.34	34.52	0.80	27.58	52	1.60
2000	(1.91)c)	(34.609)c)	(1.37)c)	(27.69)	2000	1.91	34.61	1.37	27.69	41	1.88
8	CNAV WHITETHROAT; August 7, 1959; 0559 GCT; 48°00'N, 138°00'W; sounding, 2050 fm; wind, 270°, 2 kt; weather, cloudy; sea, smooth.										
0	14.20	32.864	5.96	24.52	0	14.20	32.86	5.96	24.52	342	0.00
10	14.05	32.836	6.01	24.53	10	14.05	32.84	6.01	24.53	341	0.03
19	13.94	32.877	6.01	24.58	20	13.76	32.88	6.06	24.62	333	0.07
28	12.54	32.919	6.38	24.89	30	12.19	32.92	6.42	24.96	300	0.10
47	9.76	32.936	6.63	25.40	50	9.52	32.95	6.62	25.45	254	0.16
71	8.12	33.006	6.59	25.71	75	7.95	33.02	6.57	25.75	225	0.22
95	7.22	33.058	6.51	25.88	100	7.07	33.06	6.47	25.91	210	0.27
119	6.55	33.086	6.37	25.99	125	6.66	33.20	6.12	26.07	195	0.32
143	6.96	33.533	5.41	26.29	150	7.00	33.62	5.24	26.35	168	0.37
166	7.10	33.795	4.89	26.48	175	6.76	33.81	4.79	26.54	150	0.41
190	6.22	33.843	4.64	26.63	200	5.99	33.84	4.52	26.66	139	0.45
214	5.69	33.832	4.37	26.69	250	5.40	33.87	3.71	26.75	130	0.52
286	5.14	33.900	3.14	26.81	300	5.05	33.92	2.93	26.83	123	0.58
396	4.50	34.007	1.79	26.97	400	4.48	34.01	1.76	26.97	110	0.70
496	4.16	34.081	1.09	27.06	500	4.15	34.08	1.06	27.07	100	0.81
595	3.93	34.167	0.68	27.15	600	3.91	34.17	0.68	27.16	92	0.91
794	3.41	34.288	0.52	27.30	700	3.64	34.24	0.59	27.24	84	1.01
993	3.09	34.362	0.40	27.39	800	3.40	34.29	0.52	27.30	78	1.10
1242	2.68	34.450	0.90	27.50	1000	3.08	34.36	0.41	27.39	70	1.26
1490	2.32	34.513	0.75	27.58	1200	2.74	34.44	0.82	27.48	61	1.40
1988	1.93	34.587	1.42	27.67	1500	2.31	34.52	0.76	27.58	52	1.60
2000	(1.92)c)	(34.589)c)	(1.43)c)	(27.67)	2000	1.92	34.59	1.43	27.67	43	1.88

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.
c) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV WHITETHROAT; August 7, 1959; 1628 GCT; 47°30'N, 138°54'W; sounding, 2300 fm; wind, 300°, 2 kt; weather, partly cloudy; sea, smooth.

0	14.00	32.785	6.06	24.50	0	14.00	32.78	6.06	24.50	344	0.00
10	13.84	32.767	5.98	24.52	10	13.84	32.77	5.98	24.52	342	0.04
20	13.83	32.771	5.82	24.52	20	13.83	32.77	5.82	24.52	342	0.07
30	12.43	32.808	5.72	24.83	30	12.43	32.81	5.72	24.83	313	0.10
50	9.54	32.885	6.61	25.40	50	9.54	32.88	6.61	25.40	259	0.16
75	7.16	32.952	6.50	25.81	75	7.16	32.95	6.50	25.81	220	0.22
100	6.79	33.104	6.33	25.98	100	6.79	33.10	6.33	25.98	204	0.27
125	6.73	33.520	6.07	26.31	125	6.73	33.52	6.07	26.31	172	0.32
150	6.29	33.703	4.89	26.51	150	6.29	33.70	4.89	26.51	153	0.36
175	5.34	33.775	4.60	26.69	175	5.34	33.78	4.60	26.69	136	0.40
200	5.61	33.807	4.41	26.68	200	5.61	33.81	4.41	26.68	137	0.44
225	5.35	33.829	3.99	26.73	250	5.09	33.85	3.60	26.77	128	0.50
300	4.65	33.880	2.92	26.85	300	4.65	33.88	2.92	26.85	121	0.57
400	4.32	33.942	1.69	26.93	400	4.32	33.94	1.69	26.93	113	0.69
500	4.08	34.090	1.02	27.08	500	4.08	34.09	1.02	27.08	99	0.80
600	3.82	34.162	0.64	27.16	600	3.82	34.16	0.64	27.16	92	0.90
800	3.40	34.285	0.54	27.30	700	3.60	34.23	0.58	27.24	84	1.00
1000	3.05	34.368	0.46	27.40	800	3.40	34.28	0.54	27.30	78	1.08
1250	2.65	34.445	0.49	27.50	1000	3.05	34.37	0.46	27.40	69	1.24
1500	2.32	34.509	0.71	27.57	1200	2.72	34.43	0.48	27.48	61	1.39
2000	1.94	34.590	1.39	27.67	1500	2.32	34.51	0.71	27.57	53	1.59
2493	1.72	34.630	1.81	27.72	2000	1.94	34.59	1.39	27.67	43	1.87
2990	1.58	34.656	2.39	27.75	2500	1.72	34.63	1.83	27.72	38	2.12
3488	1.52	34.669	2.49	27.76	3000	1.58	34.66	2.39	27.75	36	2.36
3986	1.53	34.680	3.14	27.77	3500	1.52	34.67	2.50	27.76	35	2.59
4000	(1.53)a)	(34.680)a)	(3.16)a)	(27.77)	4000	1.53	34.68	3.16	27.77	34	2.83

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CNAV WHITETHROAT; August 8, 1959; 0206 GCT; 47°00'N, 140°00'W; sounding, 2400 fm; wind, 180°, 1 kt; weather, partly cloudy; sea, smooth.

0	14.30	32.929	5.72	24.55	0	14.30	32.93	5.72	24.55	340	0.00
10	14.04	32.896	6.00	24.58	10	14.04	32.90	6.00	24.58	337	0.03
20	14.05	32.899	5.99	24.58	20	14.05	32.90	5.99	24.58	337	0.07
30	12.47	32.917	5.86	24.90	30	12.47	32.92	5.86	24.90	306	0.10
50	9.12	32.941	6.24	25.51	50	9.12	32.94	6.24	25.51	248	0.16
75	6.83	32.989	6.60	25.88	75	6.83	32.99	6.60	25.88	213	0.21
100	6.56	33.050	6.36	25.96	100	6.56	33.05	6.36	25.96	205	0.27
125	6.80	33.532	5.34	26.31	125	6.80	33.53	5.34	26.31	172	0.32
150	6.51	33.778	4.83	26.54	150	6.51	33.78	4.83	26.54	150	0.36
175	6.64	33.816	4.67	26.56	175	6.64	33.82	4.67	26.56	148	0.39
200	5.65	33.831	4.41	26.69	200	5.65	33.83	4.41	26.69	136	0.43
225	5.27	33.828	3.99	26.74	250	5.04	33.85	3.48	26.78	128	0.50
300	4.65	33.894	2.61	26.86	300	4.65	33.89	2.61	26.86	120	0.56
396	4.18	34.005	1.56	27.00	400	4.17	34.01	1.53	27.00	107	0.68
493	4.04	34.093	1.04	27.08	500	4.02	34.10	1.02	27.09	98	0.79
592	3.76	34.170	0.72	27.17	600	3.74	34.18	0.71	27.18	90	0.89
790	3.42	34.290	0.47	27.30	700	3.56	34.24	0.57	27.25	83	0.98
988	3.11	34.387	0.40	27.41	800	3.40	34.30	0.47	27.31	77	1.07
1235	2.67	34.464	0.49	27.51	1000	3.09	34.39	0.40	27.41	68	1.23
1482	2.29	34.503	0.66	27.57	1200	2.73	34.45	0.48	27.50	59	1.37
1976	1.94	34.585	1.34	27.67	1500	2.28	34.51	0.69	27.58	52	1.56
2000	(1.93)a)	(34.588)a)	(1.38)a)	(27.67)	2000	1.93	34.59	1.38	27.67	43	1.84

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
11	CNAV WHITETHROAT; August 8, 1959; 1247 GCT; 46°59'N, 142°07'W; sounding, 2400 fm; wind, 140°, 15 kt; weather, intermittent slight drizzle; sea, moderate.										
0	14.10	32.868	6.01	24.54	0	14.10	32.87	6.01	24.54	340	0.00
10	13.58	32.820	5.26	24.61	10	13.58	32.82	5.26	24.61	334	0.03
20	12.29	32.892	6.09	24.92	20	12.29	32.89	6.09	24.92	304	0.07
30	11.62	32.917	6.45	25.06	30	11.62	32.92	6.45	25.06	291	0.10
50	9.64	32.996	6.50	25.47	50	9.64	33.00	6.50	25.47	252	0.15
75	6.78	33.073	6.41	25.95	75	6.78	33.07	6.41	25.95	206	0.21
100	6.64	33.071	6.22	25.97	100	6.64	33.07	6.22	25.97	204	0.26
125	6.68	33.128	5.82	26.01	125	6.68	33.13	5.82	26.01	201	0.31
150	7.14	33.653	4.04	26.36	150	7.14	33.65	4.04	26.36	167	0.36
175	6.67	33.849	3.71	26.58	175	6.67	33.85	3.71	26.58	146	0.40
200	6.04	33.832	4.33	26.65	200	6.04	33.83	4.33	26.65	140	0.44
225	5.61	33.833	3.52	26.70	250	5.29	33.84	3.23	26.75	130	0.50
300	4.73	33.861	2.71	26.83	300	4.73	33.86	2.71	26.83	123	0.57
384	4.29	33.968	2.00	26.96	400	4.27	33.99	1.89	26.97	110	0.69
479	4.17	34.067	1.39	27.05	500	4.10	34.08	1.25	27.07	100	0.80
574	3.88	34.144	0.83	27.14	600	3.81	34.16	0.80	27.16	92	0.90
763	3.46	34.262	0.59	27.28	700	3.59	34.23	0.66	27.23	85	1.00
952	3.09	34.357	0.46	27.39	800	3.38	34.28	0.56	27.30	78	1.08
1200	2.65	34.438	0.40	27.49	1000	3.00	34.37	0.45	27.41	68	1.24
1452	2.32	34.493	0.76	27.56	1200	2.65	34.44	0.40	27.49	60	1.39
1944	1.95	34.578	(1.31)a)	27.66	1500	2.28	34.50	0.82	27.57	53	1.58
2000	(1.91)b)	(34.586)b)	(1.37)b)	(27.67)	2000	1.91	34.59	1.37	27.67	43	1.87
12	CNAV WHITETHROAT; August 8, 1959; 2237 GCT; 47°00'N, 144°02'W; sounding, 2500 fm; wind, 220°, 20 kt; weather, intermittent slight drizzle; sea, moderate.										
0	14.30	32.770	6.14	24.42	0	14.30	32.77	6.14	24.42	352	0.00
10	13.55	32.736	6.19	24.55	10	13.55	32.74	6.19	24.55	340	0.04
20	13.48	32.730	6.22	24.56	20	13.48	32.73	6.22	24.56	339	0.07
29	11.26	32.806	6.65	25.04	30	11.06	32.81	6.65	25.09	288	0.10
49	7.96	32.941	6.61	25.69	50	7.88	32.94	6.61	25.70	230	0.15
73	6.33	33.012	6.63	25.96	75	6.31	33.01	6.64	25.97	204	0.21
98	6.16	33.008	6.70	25.98	100	6.19	33.02	6.66	25.99	202	0.26
123	6.50	33.157	6.33	26.06	125	6.57	33.22	6.13	26.10	192	0.31
147	7.28	33.879	4.11	26.52	150	7.23	33.88	4.16	26.53	151	0.35
172	6.87	33.926	4.44	26.61	175	6.78	33.92	4.42	26.62	143	0.39
196	6.20	33.873	4.38	26.66	200	6.11	33.87	4.33	26.67	138	0.43
221	5.64	33.849	4.09	26.71	250	4.99	33.85	3.82	26.79	127	0.50
246	(5.02)c)	33.847	3.89	(26.78)	300	4.68	33.88	3.02	26.85	121	0.56
295	4.70	33.878	3.09	26.84	400	4.37	33.98	1.85	26.96	110	0.68
392	(4.40)c)	33.970	1.92	(26.95)	500	4.05	34.08	1.19	27.07	100	0.79
490	4.08	34.073	1.23	27.06	600	3.80	34.16	0.85	27.16	92	0.89
588	3.83	34.152	0.87	27.15	700	3.56	34.23	0.71	27.24	84	0.98
786	3.38	34.277	0.59	27.29	800	3.35	34.28	0.59	27.30	78	1.07
983	3.05	(34.360)c)	0.56	(27.39)	1000	3.02	34.37	0.55	27.40	69	1.23
1232	2.67	34.436	0.44	27.49	1200	2.71	34.43	0.45	27.48	61	1.38
1480	2.31	34.499	0.74	27.57	1500	2.29	34.50	0.76	27.57	53	1.58
1977	1.95	34.588	1.30	27.67	2000	1.94	34.59	1.32	27.67	43	1.86
2370	1.76	34.628	1.69	27.71	2500	1.72	34.64	1.81	27.72	38	2.11
2860	1.61	34.652	2.14	27.74	3000	1.58	34.66	2.30	27.75	36	2.35
3348	1.51	34.676	2.67	27.77	3500	1.51	34.68	2.76	27.77	34	2.58
3837	1.50	34.683	2.96	27.78	4000	1.50	34.68	3.05	27.78	33	2.81
4000	(1.50)b)	(34.685)b)	(3.05)b)	(27.78)							

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.
c) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV WHITETHROAT; August 9, 1959; 1226 GCT; 46°58'N, 146°01'W; sounding, 2600 fm; wind, 020°, 7 kt; weather, cloudy; sea, smooth.

0	14.00	32.812	6.14	24.52	0	14.00	32.81	6.14	24.52	342	0.00
10	13.66	32.785	6.13	24.57	10	13.66	32.78	6.13	24.57	338	0.03
20	13.50	32.813	6.20	24.62	20	13.50	32.81	6.20	24.62	333	0.07
29	11.47	32.895	6.57	25.07	30	11.33	32.90	6.57	25.10	287	0.10
49	9.26	32.970	6.48	25.51	50	9.13	32.98	6.50	25.54	245	0.15
73	6.62	33.103	6.63	26.00	75	6.60	33.10	6.63	26.00	202	0.21
98	6.35	33.100	6.60	26.03	100	6.35	33.11	6.57	26.04	198	0.26
123	6.30	33.226	6.36	26.14	125	6.36	33.28	6.24	26.17	185	0.31
147	7.02	33.783	5.05	26.48	150	7.02	33.80	4.98	26.49	155	0.35
172	6.99	33.910	4.49	26.58	175	6.94	33.91	4.46	26.59	146	0.39
196	6.61	33.935	4.28	26.65	200	6.54	33.93	4.28	26.66	139	0.43
221	6.18	33.914	4.26	26.69	250	5.64	33.88	3.98	26.74	131	0.50
246	5.70	33.884	4.03	26.73	300	4.98	33.89	3.35	26.82	124	0.56
295	5.02	33.884	3.43	26.81	400	4.35	33.94	2.11	26.93	113	0.69
395	4.36	33.930	2.13	26.92	500	4.12	34.07	1.71	27.06	101	0.80
494	4.14	34.068	1.76	27.05	600	3.86	34.16	1.03	27.15	92	0.90
594	3.88	34.153	1.04	27.15	700	3.60	34.22	0.78	27.23	85	1.00
792	3.39	34.276	0.59	27.29	800	3.37	34.28	0.59	27.30	78	1.08
991	3.05	34.366	0.48	27.40	1000	3.03	34.37	0.48	27.40	69	1.24
1240	2.64	34.440	0.39	27.49	1200	2.70	34.43	0.40	27.48	61	1.39
1488	2.35	34.498	0.56	27.56	1500	2.34	34.50	0.58	27.57	53	1.59
1984	1.98	34.583	1.20	27.66	2000	1.97	34.58	1.22	27.66	44	1.88
2000	(1.97)a)	(34.585)a)	(1.22)a)	(27.66)							

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CNAV WHITETHROAT; August 9, 1959; 2231 GCT; 46°59'N, 147°59'W; sounding, 2550 fm; wind, 360°, 8 kt; weather, overcast; sea, smooth.

0	13.20	32.891	6.19	24.74	0	13.20	32.89	6.19	24.74	321	0.00
10	12.82	32.850	6.20	24.79	10	12.82	32.85	6.20	24.79	317	0.03
20	12.81	32.854	6.20	24.79	20	12.81	32.85	6.20	24.79	317	0.06
30	10.86	33.008	6.44	25.27	30	10.86	33.01	6.44	25.27	271	0.09
50	8.22	33.093	6.57	25.77	50	8.22	33.09	6.57	25.77	223	0.14
75	6.43	33.176	6.64	26.08	75	6.43	33.18	6.64	26.08	194	0.20
100	5.90	33.141	6.59	26.12	100	5.90	33.14	6.59	26.12	190	0.24
125	(6.05)b)	33.195	6.53	(26.14)	125	6.05	33.20	6.53	26.14	188	0.29
150	6.66	33.615	5.64	26.40	150	6.66	33.62	5.64	26.40	164	0.34
175	6.55	33.791	4.96	26.55	175	6.55	33.79	4.96	26.55	149	0.38
200	6.33	33.881	4.37	26.65	200	6.33	33.88	4.37	26.65	140	0.42
225	5.99	33.888	4.27	26.70	250	5.50	33.88	3.99	26.75	130	0.48
250	5.50	33.884	3.99	26.75	300	4.94	33.88	3.43	26.82	124	0.55
300	4.94	33.881	3.43	26.82	400	4.28	33.95	2.25	26.94	112	0.67
389	(4.31)b)	33.932	2.34	(26.93)	500	4.02	34.06	1.57	27.06	101	0.78
488	4.04	34.050	1.62	27.05	600	3.84	34.17	1.12	27.16	92	0.89
586	3.88	34.159	1.16	27.15	700	3.59	34.23	0.85	27.23	85	0.98
784	3.41	34.270	0.65	27.29	800	3.38	34.28	0.65	27.30	78	1.07
981	3.04	34.362	0.59	27.39	1000	3.01	34.37	0.59	27.40	69	1.23
1228	2.65	34.446	0.57	27.50	1200	2.69	34.44	0.57	27.49	60	1.37
1474	2.35	34.507	0.84	27.57	1500	2.33	34.51	0.86	27.58	52	1.57
1968	1.98	34.586	1.24	27.66	2000	1.96	34.59	1.30	27.67	43	1.85
2456	1.74	34.629	1.95	27.72	2500	1.73	34.63	1.97	27.72	38	2.11
2949	1.61	34.657	2.22	27.75	3000	1.60	34.66	2.24	27.75	36	2.34
3441	1.52	34.676	2.41	27.77	3500	1.52	34.68	2.49	27.77	34	2.58
3933	1.50	34.679	3.05	27.77	4000	1.50	34.68	3.12	27.77	34	2.81
4000	(1.50)a)	(34.679)a)	(3.12)a)	(27.77)							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
15	CNAV WHITETHROAT; August 10, 1959; 0837 GCT; 46°00'N, 148°00'W; sounding, 3000 fm; wind, 020°, 6 kt; weather, overcast; sea, smooth.										
0	14.10	32.869	6.72	24.54	0	14.10	32.87	6.72	24.54	340	0.00
10	13.82	32.934	6.72	24.65	10	13.82	32.93	6.72	24.65	330	0.03
20	12.42	32.964	6.72	24.95	20	12.42	32.96	6.72	24.95	301	0.06
30	11.26	33.006	6.72	25.20	30	11.26	33.01	6.72	25.20	278	0.10
50	9.44	33.127	6.72	25.60	50	9.44	33.13	6.72	25.60	240	0.15
75	7.53	33.252	6.72	25.99	75	7.53	33.25	6.72	25.99	202	0.20
100	6.84	33.250	6.46	26.08	100	6.84	33.25	6.46	26.08	194	0.25
125	6.66	33.273	6.69	26.13	125	6.66	33.27	6.69	26.13	189	0.30
150	7.00	33.490	6.15	26.25	150	7.00	33.49	6.15	26.25	178	0.35
175	7.29	33.778	5.56	26.44	175	7.29	33.78	5.56	26.44	160	0.39
200	7.32	33.922	5.23	26.55	200	7.32	33.92	5.23	26.55	149	0.43
225	7.06	33.966	4.48	26.62	250	6.51	33.94	4.28	26.67	138	0.50
250	6.51	33.935	(4.28)a)	26.67	300	5.60	33.91	3.92	26.76	129	0.57
300	5.60	33.908	3.92	26.76	400	4.52	33.94	2.68	26.91	115	0.70
394	4.54	33.935	2.73	26.90	500	4.26	34.04	1.80	27.02	105	0.82
492	4.28	34.027	1.87	27.01	600	4.03	34.15	1.13	27.13	94	0.92
591	4.06	34.140	1.14	27.12	700	3.74	34.21	1.02	27.20	88	1.02
789	3.52	34.256	0.93	27.26	800	3.50	34.26	0.91	27.27	81	1.11
986	3.13	34.358	0.62	27.38	1000	3.10	34.36	0.62	27.39	70	1.28
1234	2.69	34.446	0.62	27.49	1200	2.74	34.44	0.62	27.48	61	1.42
1480	2.36	34.494	0.76	27.56	1500	2.34	34.50	0.77	27.56	54	1.62
1975	1.96	34.597	0.96	27.67	2000	1.94	34.60	0.97	27.68	42	1.90
2000	(1.94)b)	(34.601)b)	(0.97)b)	(27.68)							
16	CNAV WHITETHROAT; August 10, 1959; 1644 GCT; 45°00'N, 148°00'W; sounding, 2700 fm; wind, 030°, 9 kt; weather, cloudy; sea, slight.										
0	15.10	32.917	5.81	24.37	0	15.10	32.92	5.81	24.37	357	0.00
10	15.04	32.896	5.99	24.36	10	15.04	32.90	5.99	24.36	358	0.04
20	12.89	32.973	6.57	24.87	20	12.89	32.97	6.57	24.87	309	0.07
30	11.72	33.014	6.61	25.12	30	11.72	33.01	6.61	25.12	285	0.10
50	9.07	33.110	6.36	25.65	50	9.07	33.11	6.36	25.65	235	0.15
75	7.17	33.168	6.50	25.98	75	7.17	33.17	6.50	25.98	204	0.21
100	6.98	33.178	6.44	26.01	100	6.98	33.18	6.44	26.01	201	0.26
125	6.92	33.354	6.29	26.16	125	6.92	33.35	6.29	26.16	186	0.31
150	7.73	33.743	5.61	26.35	150	7.73	33.74	5.61	26.35	168	0.35
175	8.03	33.876	5.12	26.41	175	8.03	33.88	5.12	26.41	163	0.40
200	7.64	33.964	4.47	26.53	200	7.64	33.96	4.47	26.53	151	0.44
225	7.12	33.962	4.38	26.61	250	6.52	33.91	4.30	26.65	140	0.51
250	6.52	33.914	4.30	26.65	300	5.69	33.90	3.88	26.75	130	0.58
300	5.69	33.901	3.88	26.75	400	4.70	33.93	2.74	26.88	118	0.71
400	4.70	33.932	(2.74)a)	26.88	500	4.34	34.03	1.87	27.00	107	0.83
500	4.34	34.031	1.87	27.00	600	4.09	34.12	1.10	27.10	97	0.94
600	4.09	34.118	1.10	27.10	700	3.77	34.20	0.87	27.19	89	1.04
800	3.49	34.264	0.68	27.27	800	3.49	34.26	0.68	27.27	81	1.13
1000	3.07	(34.360)c)	(0.57)a)	(27.39)	1000	3.07	34.36	0.57	27.39	70	1.29
1250	2.68	34.451	0.46	27.50	1200	2.75	34.43	0.48	27.48	61	1.44
1500	2.32	34.499	0.67	27.57	1500	2.32	34.50	0.67	27.57	53	1.64
2000	1.95	34.598	1.24	27.68	2000	1.95	34.60	1.24	27.68	42	1.92

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.
c) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV WHITETHROAT; August 11, 1959; 0613 GCT; 44°00'N, 148°00'W; sounding, 2800 fm; wind, 090°, 10 kt; weather, overcast; sea, slight. 17

0	15.90	33.005	5.92	24.26	0	15.90	33.00	5.92	24.26	367	0.00
10	16.04	32.986	5.96	24.21	10	16.04	32.99	5.96	24.21	372	0.04
20	13.30	33.000	6.47	24.81	20	13.30	33.00	6.47	24.81	315	0.07
30	11.68	33.072	6.66	25.17	30	11.68	33.07	6.66	25.17	280	0.10
50	9.58	33.168	6.27	25.61	50	9.58	33.17	6.27	25.61	239	0.15
75	7.98	33.272	6.36	25.94	75	7.98	33.27	6.36	25.94	207	0.21
100	7.42	33.234	6.36	25.99	100	7.42	33.23	6.36	25.99	202	0.26
125	7.54	33.394	6.13	26.10	125	7.54	33.39	6.13	26.10	192	0.31
150	7.93	33.733	5.60	26.31	150	7.93	33.73	5.60	26.31	172	0.36
175	8.25	33.902	5.03	26.40	175	8.25	33.90	5.03	26.40	164	0.40
200	7.86	33.974	4.01	26.51	200	7.86	33.97	4.01	26.51	153	0.44
225	7.43	33.980	4.38	26.58	250	6.80	33.94	4.35	26.64	141	0.52
250	6.80	33.944	4.35	26.64	300	5.98	33.92	3.96	26.72	133	0.59
300	5.98	33.917	3.96	26.72	400	4.84	33.95	2.68	26.88	118	0.72
394	4.87	33.941	2.74	26.87	500	4.35	34.04	1.75	27.00	107	0.84
492	4.37	34.027	1.80	27.00	600	4.08	34.12	1.15	27.10	97	0.94
591	4.11	34.118	1.18	27.10	700	3.77	34.20	0.96	27.19	89	1.04
788	3.54	34.254	0.82	27.26	800	3.51	34.26	0.80	27.27	81	1.14
986	3.16	34.344	0.46	27.37	1000	3.13	34.35	0.46	27.38	71	1.30
1233	2.70	34.441	0.39	27.49	1200	2.76	34.43	0.40	27.47	62	1.45
1480	2.34	34.509	0.45	27.57	1500	2.32	34.51	0.48	27.58	52	1.65
1974	1.94	34.596	1.21	27.67	2000	1.93	34.60	1.24	27.68	42	1.93
2500	1.70	34.640	1.90	27.73	2500	1.70	34.64	1.90	27.73	38	2.18
3000	1.56	34.670	2.42	27.76	3000	1.56	34.67	2.42	27.76	35	2.41
3500	1.51	34.678	2.72	27.77	3500	1.51	34.68	2.72	27.77	34	2.64
4000	1.51	34.689	3.00	27.78	4000	1.51	34.69	3.00	27.78	33	2.87

CNAV WHITETHROAT; August 11, 1959; 1636 GCT; 43°00'N, 148°02'W; sounding, 2800 fm; wind, 130°, 12 kt; weather, overcast; sea, slight. 18

0	16.80	33.000	5.69	24.05	0	16.80	33.00	5.69	24.05	387	0.00
10	16.74	32.958	5.70	24.03	10	16.74	32.96	5.70	24.03	389	0.04
20	14.98	33.005	6.24	24.46	20	14.98	33.00	6.24	24.46	348	0.08
30	12.48	33.046	6.68	25.00	30	12.48	33.05	6.68	25.00	297	0.11
49	10.28	33.189	6.27	25.51	50	10.17	33.19	6.27	25.54	245	0.16
73	8.00	33.281	6.27	25.95	75	7.97	33.28	6.27	25.95	206	0.22
98	7.70	33.285	6.27	25.99	100	7.73	33.31	6.24	26.01	201	0.27
122	8.00	33.519	5.90	26.13	125	8.01	33.55	5.87	26.16	186	0.32
147	8.09	33.778	5.68	26.32	150	8.12	33.79	5.67	26.33	170	0.37
171	8.33	33.884	5.60	26.37	175	8.31	33.89	5.51	26.38	166	0.41
196	8.22	33.923	5.06	26.42	200	8.16	33.94	4.89	26.44	160	0.45
220	7.89	33.998	4.08	26.52	250	7.43	34.00	4.21	26.59	146	0.53
245	7.54	34.004	4.23	26.58	300	6.49	33.95	4.01	26.68	137	0.60
294	6.58	33.949	4.08	26.67	400	5.24	33.94	3.02	26.83	123	0.74
376	5.43	33.929	3.19	26.80	500	4.59	34.01	2.25	26.96	110	0.86
471	4.73	33.978	2.60	26.92	600	4.17	34.10	1.42	27.07	100	0.97
565	4.29	34.066	1.53	27.04	700	3.85	34.17	1.12	27.17	91	1.08
753	3.70	34.209	0.99	27.21	800	3.57	34.24	0.90	27.24	84	1.17
942	3.23	34.310	0.64	27.34	1000	3.11	34.34	0.62	27.37	72	1.34
1188	2.76	34.422	0.57	27.47	1200	2.74	34.43	0.58	27.47	62	1.49
1433	2.38	34.501	0.74	27.56	1500	2.31	34.52	0.84	27.58	52	1.68
1923	1.95	34.589	1.40	27.67	2000	1.89	34.60	1.49	27.68	42	1.96
2000	(1.89)a)	(34.601)a)	(1.49)a)	(27.68)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
19	CNAV WHITETHROAT; August 12, 1959; 0018 GCT; 42°00'N, 148°00'W; sounding, 2850 fm; wind, 090°, 3 kt; weather, cloudy; sea, smooth.										
0	19.40	33.072	5.68	23.47	0	19.40	33.07	5.68	23.47	442	0.00
10	18.76	33.048	5.26	23.61	10	18.76	33.05	5.26	23.61	429	0.04
20	13.49	33.092	6.15	24.84	20	13.49	33.09	6.15	24.84	407	0.08
30	12.36	33.162	6.32	25.12	30	12.36	33.16	6.32	25.12	380	0.11
50	10.39	33.274	5.36	25.56	50	10.39	33.27	5.36	25.56	339	0.16
75	8.27	33.315	6.92	25.93	75	8.27	33.32	6.92	25.93	303	0.22
100	7.70	33.302	6.31	26.01	100	7.70	33.30	6.31	26.01	201	0.27
125	7.78	33.429	6.43	26.09	125	7.78	33.43	6.43	26.09	193	0.32
150	8.58	33.815	5.68	26.28	150	8.58	33.82	5.68	26.28	175	0.37
175	8.40	33.880	6.12	26.36	175	8.40	33.88	6.12	26.36	167	0.41
200	8.39	33.944	5.26	26.41	200	8.39	33.94	5.26	26.41	163	0.46
225	8.28	34.014	4.75	26.48	250	7.75	34.00	4.39	26.55	149	0.54
250	7.75	34.001	4.39	26.55	300	6.52	33.94	4.23	26.67	138	0.61
300	6.52	33.940	4.23	26.67	400	5.15	33.94	3.16	26.84	122	0.75
400	5.15	33.944	3.16	26.84	500	4.54	34.03	1.93	26.98	109	0.87
500	4.54	34.029	1.93	26.98	600	4.15	34.12	2.03	27.09	98	0.98
600	4.15	34.120	2.03	27.09	700	3.81	34.19	1.51	27.19	89	1.08
800	3.52	34.256	1.08	27.26	800	3.52	34.26	1.08	27.26	82	1.17
1000	3.05	34.368	0.43	27.40	1000	3.05	34.37	0.43	27.40	69	1.34
1250	2.66	34.457	0.46	27.50	1200	2.73	34.44	0.45	27.48	61	1.48
1500	2.31	34.526	0.86	27.59	1500	2.31	34.53	0.86	27.59	51	1.67
2000	1.91	34.611	1.56	27.69	2000	1.91	34.61	1.56	27.69	41	1.95
20	CNAV WHITETHROAT; August 12, 1959; 0836 GCT; 41°00'N, 148°00'W; sounding, 2800 fm; wind, 250°, 7 kt; weather, cloudy; sea, smooth.										
0	20.80	33.187	5.19	23.19	0	20.80	33.19	5.19	23.19	469	0.00
10	18.48	33.228	5.31	23.82	10	18.48	33.23	5.31	23.82	409	0.04
20	15.13	33.286	6.29	24.64	20	15.13	33.29	6.29	24.64	331	0.08
30	14.02	33.316	6.18	24.90	30	14.02	33.32	6.18	24.90	306	0.11
50	11.63	33.416	5.91	25.45	50	11.63	33.42	5.91	25.45	254	0.17
75	9.75	33.454	6.09	25.81	75	9.75	33.45	6.09	25.81	220	0.23
100	9.10	33.500	5.99	25.95	100	9.10	33.50	5.99	25.95	206	0.28
125	9.30	33.732	5.69	26.10	125	9.30	33.73	5.69	26.10	192	0.34
150	9.22	33.933	5.43	26.27	150	9.22	33.93	5.43	26.27	176	0.38
175	9.00	33.968	5.41	26.33	175	9.00	33.97	5.41	26.33	170	0.43
200	8.78	33.962	5.24	26.36	200	8.78	33.96	5.24	26.36	167	0.47
225	8.82	34.044	4.75	26.42	250	8.45	34.05	4.42	26.48	156	0.55
250	8.45	34.049	4.42	26.48	300	7.24	33.98	4.19	26.61	144	0.63
300	7.24	33.985	4.19	26.61	400	5.79	33.94	3.56	26.76	129	0.77
400	5.79	33.936	3.56	26.76	500	4.88	33.99	2.26	26.91	115	0.90
500	4.88	33.991	2.26	26.91	600	4.33	34.08	1.53	27.04	103	1.02
600	4.33	34.080	1.53	27.04	700	3.96	34.16	1.08	27.15	92	1.12
800	3.64	34.235	0.67	27.24	800	3.64	34.24	0.67	27.24	84	1.22
1000	3.14	34.346	0.48	27.37	1000	3.14	34.35	0.48	27.37	72	1.39
1250	2.68	34.449	0.39	27.50	1200	2.76	34.43	0.40	27.47	62	1.54
1500	2.36	34.518	0.62	27.58	1500	2.36	34.52	0.62	27.58	52	1.73
1966	1.95	34.596	1.38	27.67	2000	1.93	34.60	1.41	27.68	42	2.02
2456	1.73	34.638	1.84	27.72	2500	1.71	34.64	1.89	27.73	38	2.26
2947	1.55	34.669	2.45	27.76	3000	1.54	34.67	2.50	27.76	35	2.50
3438	1.50	34.680	2.80	27.77	3500	1.49	34.68	2.84	27.78	33	2.72
3500	(1.49)a)	(34.681)a)	(2.84)a)	(27.78)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV WHITETHROAT; August 12, 1959; 1956 GCT; 40°00'N, 147°00'W; sounding, 3180 fm; wind, 220°, 6 kt; weather, partly cloudy; sea, smooth.

0	21.90	33.539	5.19	23.16	0	21.90	33.54	5.19	23.16	472	0.00
10	21.60	33.504	5.19	23.21	10	21.60	33.50	5.19	23.21	467	0.05
20	20.80	33.548	5.25	23.46	20	20.80	33.55	5.25	23.46	444	0.09
30	16.26	33.433	6.31	24.50	30	16.26	33.43	6.31	24.50	344	0.13
49	13.08	33.521	6.38	25.25	50	12.98	33.53	6.37	25.28	270	0.19
73	11.14	33.716	6.08	25.77	75	11.08	33.72	6.07	25.79	222	0.26
98	10.46	33.782	5.91	25.94	100	10.44	33.79	5.89	25.95	206	0.31
122	10.26	33.884	5.66	26.06	125	10.26	33.90	5.58	26.07	195	0.36
147	10.26	33.973	5.08	26.13	150	10.21	33.98	5.13	26.14	188	0.41
171	9.90	34.062	5.43	26.26	175	9.87	34.07	5.41	26.27	176	0.46
196	9.71	34.092	5.32	26.31	200	9.64	34.08	5.34	26.32	171	0.50
220	9.33	34.046	5.42	26.34	250	9.09	34.07	5.01	26.40	164	0.59
245	9.17	34.071	5.06	26.38	300	8.32	34.07	4.47	26.51	153	0.67
294	8.46	34.074	4.51	26.50	400	6.39	33.97	3.76	26.71	134	0.82
381	6.67	33.976	3.96	26.68	500	5.19	33.98	2.74	26.87	119	0.96
476	5.38	33.962	3.02	26.83	600	4.53	34.06	1.77	27.00	107	1.08
570	4.67	34.029	1.98	26.97	700	4.09	34.15	1.13	27.12	95	1.18
760	3.86	34.194	0.80	27.18	800	3.74	34.22	0.73	27.21	87	1.28
956	3.32	34.309	0.52	27.33	1000	3.22	34.33	0.48	27.35	74	1.46
1203	2.82	34.421	0.35	27.46	1200	2.83	34.42	0.35	27.46	63	1.61
1450	2.39	34.494	0.46	27.56	1500	2.34	34.51	0.57	27.57	53	1.81
2040	1.90	34.617	1.55	27.69	2000	1.93	34.61	1.48	27.69	41	2.09

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CNAV WHITETHROAT; August 13, 1959; 0525 GCT; 39°00'N, 146°00'W; sounding, 2950 fm; wind, 190°, 5 kt; weather, partly cloudy; sea, smooth.

0	22.30	33.782	5.13	23.23	0	22.30	33.78	5.13	23.23	465	0.00
10	20.49	33.749	5.22	23.70	10	20.49	33.75	5.22	23.70	421	0.04
20	20.90	33.759	5.28	23.60	20	20.90	33.76	5.28	23.60	430	0.09
30	18.26	33.721	5.69	24.25	30	18.26	33.72	5.69	24.25	368	0.13
50	15.00	33.720	6.19	25.01	50	15.00	33.72	6.19	25.01	296	0.19
75	12.60	33.780	6.14	25.55	75	12.60	33.78	6.14	25.55	244	0.26
100	11.54	33.817	5.75	25.78	100	11.54	33.82	5.75	25.78	222	0.32
125	10.86	33.831	5.77	25.91	125	10.86	33.83	5.77	25.91	210	0.38
150	10.54	33.899	5.72	26.02	150	10.54	33.90	5.72	26.02	200	0.43
175	10.38	34.004	5.43	26.13	175	10.38	34.00	5.43	26.13	189	0.48
200	10.17	34.065	5.23	26.21	200	10.17	34.06	5.23	26.21	182	0.53
225	9.99	34.088	5.33	26.26	250	9.76	34.09	5.23	26.30	173	0.62
250	9.76	34.091	5.23	26.30	300	9.11	34.10	4.79	26.41	163	0.71
300	9.11	34.095	4.79	26.41	400	7.78	34.01	4.21	26.55	149	0.87
394	7.92	34.015	4.28	26.53	500	5.70	33.98	3.12	26.80	126	1.01
493	5.77	33.971	3.20	26.79	600	4.79	34.04	2.06	26.96	110	1.14
592	4.83	34.028	2.13	26.95	700	4.27	34.13	1.30	27.09	98	1.25
789	3.87	34.196	0.71	27.18	800	3.84	34.20	0.68	27.19	89	1.35
986	3.35	34.327	0.36	27.34	1000	3.32	34.34	0.36	27.35	74	1.53
1233	2.88	34.448	0.38	27.48	1200	2.94	34.43	0.38	27.46	62	1.68
1480	2.51	34.534	0.65	27.58	1500	2.49	34.54	0.68	27.58	52	1.88
2000	1.97	34.613	1.39	27.69	2000	1.97	34.61	1.39	27.69	41	2.16
2500	1.71	34.662	1.99	27.75	2500	1.71	34.66	1.99	27.75	36	2.41
3000	1.56	34.671	2.50	27.76	3000	1.56	34.67	2.50	27.76	35	2.64
3500	1.50	34.703	2.77	27.79	3500	1.50	34.70	2.77	27.79	32	2.86
4000	1.51	34.703	(3.00)a)	27.79	4000	1.51	34.70	3.00	27.79	32	3.08

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
23	CNAV WHITETHROAT; August 13, 1959; 1824 GCT; 38°54'N, 144°00'W; sounding, 2750 fm; wind, 180°, 7 kt; weather, overcast; sea, smooth.										
0	21.20	33.742	5.30	23.50	0	21.20	33.74	5.30	23.50	440	0.00
10	21.26	33.690	5.17	23.45	10	21.26	33.69	5.17	23.45	444	0.04
20	16.78	33.540	5.78	24.47	20	16.78	33.54	5.78	24.47	347	0.08
30	16.85	33.693	6.01	24.57	30	16.85	33.69	6.01	24.57	338	0.12
49	13.98	33.805	6.44	25.29	50	13.85	33.80	6.42	25.31	267	0.18
74	11.34	33.751	6.05	25.76	75	11.32	33.76	6.04	25.77	223	0.24
98	11.00	33.862	5.82	25.91	100	10.96	33.87	5.81	25.92	209	0.30
123	10.58	33.939	5.64	26.04	125	10.56	33.94	5.66	26.05	197	0.35
147	10.40	34.006	5.82	26.13	150	10.35	34.01	5.70	26.14	188	0.40
171	10.05	34.041	4.92	26.22	175	10.01	34.05	4.98	26.23	180	0.44
196	9.82	34.073	5.30	26.28	200	9.78	34.07	5.32	26.28	175	0.49
220	9.58	34.063	5.41	26.31	250	9.28	34.08	5.06	26.37	166	0.58
245	9.36	34.080	5.12	26.36	300	8.49	34.07	4.61	26.49	155	0.66
294	8.62	34.078	4.65	26.48	400	6.59	33.99	3.95	26.70	135	0.81
382	6.87	33.994	4.17	26.67	500	5.33	33.98	2.89	26.85	121	0.95
478	5.52	33.967	3.15	26.82	600	4.61	34.05	1.90	26.98	109	1.07
575	4.73	34.021	2.11	26.95	700	4.17	34.14	1.19	27.10	97	1.18
773	3.88	34.192	0.73	27.18	800	3.80	34.21	0.69	27.20	88	1.28
970	3.34	34.333	0.54	27.34	1000	3.28	34.35	0.52	27.36	73	1.46
1218	2.86	34.442	0.35	27.47	1200	2.89	34.44	0.36	27.47	62	1.61
1465	2.50	34.523	0.68	27.57	1500	2.46	34.53	0.75	27.58	52	1.81
2056	1.95	34.626	1.61	27.70	2000	1.99	34.62	1.53	27.69	41	2.09
24	CNAV WHITETHROAT; August 14, 1959; 0422 GCT; 38°51'N, 142°00'W; sounding, 2780 fm; wind, calm; weather, overcast; sea, smooth.										
0	20.60	33.733	5.10	23.66	0	20.60	33.73	5.10	23.66	424	0.00
10	19.52	33.661	5.42	23.89	10	19.52	33.66	5.42	23.89	402	0.04
20	19.20	33.743	5.53	24.03	20	19.20	33.74	5.53	24.03	389	0.08
30	17.37	33.608	5.70	24.38	30	17.37	33.61	5.70	24.38	356	0.12
50	15.47	33.775	6.03	24.94	50	15.47	33.78	6.03	24.94	302	0.18
75	13.27	33.717	6.05	25.37	75	13.27	33.72	6.05	25.37	262	0.26
100	11.48	33.678	5.76	25.68	100	11.48	33.68	5.76	25.68	232	0.32
125	10.41	33.717	5.38	25.90	125	10.41	33.72	5.38	25.90	211	0.38
150	9.99	33.869	5.29	26.09	150	9.99	33.87	5.29	26.09	193	0.43
175	9.81	34.014	5.11	26.23	175	9.81	34.01	5.11	26.23	180	0.48
200	9.62	34.061	5.04	26.30	200	9.62	34.06	5.04	26.30	173	0.52
225	9.30	34.081	4.97	26.37	250	8.71	34.05	4.80	26.44	160	0.61
250	8.71	34.053	4.80	26.44	300	7.82	34.02	4.46	26.55	149	0.69
400	6.41	33.967	3.90	26.71	400	6.41	33.97	3.90	26.71	134	0.84
500	5.20	33.984	2.62	26.87	500	5.20	33.98	2.62	26.87	119	0.97
600	4.52	34.057	1.65	27.00	600	4.52	34.06	1.65	27.00	107	1.09
800	3.76	34.219	0.85	27.21	700	4.11	34.14	1.22	27.12	95	1.20
1000	3.21	34.344	0.45	27.36	800	3.76	34.22	0.85	27.21	87	1.30
1250	2.73	34.456	0.38	27.50	1000	3.21	34.34	0.45	27.36	73	1.47
1500	2.40	34.540	0.68	27.59	1200	2.82	34.44	0.39	27.47	62	1.62
2100	1.90	34.630	1.74	27.70	1500	2.40	34.54	0.68	27.59	51	1.81
					2000	1.97	34.62	1.58	27.69	41	2.09

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CNAV WHITETHROAT; August 14, 1959; 1603 GCT; 38°47'N, 140°00'W; sounding, 2850 fm; wind, 060°, 5 kt; weather, overcast; sea, smooth.											25
0	21.60	33.782	5.34	23.43	0	21.60	33.78	5.34	23.43	446	0.00
10	20.19	33.749	5.31	23.78	10	20.19	33.75	5.31	23.78	413	0.04
20	19.40	33.695	5.43	23.94	20	19.40	33.70	5.43	23.94	398	0.08
30	18.03	33.635	5.63	24.24	30	18.03	33.64	5.63	24.24	369	0.12
50	15.22	33.768	6.09	24.99	50	15.22	33.77	6.09	24.99	298	0.19
75	13.32	33.787	6.28	25.41	75	13.32	33.79	6.28	25.41	258	0.26
100	11.41	33.652	5.89	25.67	100	11.41	33.65	5.89	25.67	233	0.32
125	10.78	33.739	5.56	25.85	125	10.78	33.74	5.56	25.85	216	0.38
150	10.23	33.808	5.53	26.00	150	10.23	33.81	5.53	26.00	202	0.43
175	9.93	33.950	5.23	26.16	175	9.93	33.95	5.23	26.16	186	0.48
200	9.72	34.009	5.19	26.25	200	9.72	34.01	5.19	26.25	178	0.53
225	9.63	34.063	5.01	26.30	250	9.14	34.08	4.80	26.40	164	0.62
250	9.14	34.079	4.80	26.40	300	8.27	34.04	4.64	26.50	154	0.70
300	8.27	34.040	4.64	26.50	400	6.68	33.97	4.08	26.67	138	0.85
400	6.68	33.966	4.08	26.67	500	5.38	33.97	2.71	26.84	122	0.99
500	5.38	33.971	2.71	26.84	600	4.58	34.04	1.64	26.99	108	1.11
600	4.58	34.045	1.64	26.99	700	4.14	34.14	1.08	27.11	96	1.22
800	3.76	34.232	0.58	27.22	800	3.76	34.23	0.58	27.22	86	1.32
1000	3.36	34.373	0.40	27.37	1000	3.36	34.37	0.40	27.37	72	1.49
1250	2.92	34.478	0.41	27.50	1200	3.00	34.46	0.41	27.48	61	1.64
1500	2.51	34.533	0.72	27.58	1500	2.51	34.53	0.72	27.58	52	1.84
1991	1.96	34.613	1.42	27.69	2000	1.96	34.61	1.43	27.69	41	2.12
2483	1.75	34.648	1.96	27.73	2500	1.74	34.65	1.98	27.73	38	2.37
2975	1.59	34.666	2.42	27.76	3000	1.59	34.67	2.44	27.76	35	2.60
3468	1.51	34.678	2.78	27.77	3500	1.51	34.68	2.79	27.77	34	2.83
3960	1.50	34.698	2.98	27.79	4000	1.50	34.70	2.99	27.79	32	3.06
4000	(1.50)a)	(34.700)a)	(2.99)a)	(27.79)							
CNAV WHITETHROAT; August 15, 1959; 0527 GCT; 38°41'N, 138°00'W; sounding, 2700 fm; wind, 330°, 8 kt; weather, cloudy; sea, smooth.											26
0	20.20	33.835	5.35	23.84	0	20.20	33.84	5.35	23.84	407	0.00
10	19.86	33.779	5.39	23.89	10	19.86	33.78	5.39	23.89	402	0.04
20	19.06	33.744	5.44	24.07	20	19.06	33.74	5.44	24.07	385	0.08
30	18.93	33.732	5.43	24.09	30	18.93	33.73	5.43	24.09	383	0.12
49	15.76	33.658	5.94	24.79	50	15.67	33.66	5.95	24.81	315	0.19
73	13.84	33.637	6.13	25.19	75	13.70	33.63	6.10	25.21	277	0.26
98	12.24	33.569	5.91	25.45	100	12.14	33.57	5.89	25.47	252	0.33
122	(11.14)b)	33.587	5.66	(25.67)	125	11.01	33.59	5.64	25.70	230	0.39
147	10.18	33.641	5.53	25.88	150	10.19	33.67	5.49	25.90	211	0.45
171	10.23	33.854	5.23	26.04	175	10.17	33.88	5.17	26.07	195	0.50
196	9.88	33.995	4.88	26.21	200	9.83	34.01	4.89	26.23	180	0.55
220	9.58	34.056	4.96	26.31	250	9.07	34.06	4.92	26.39	164	0.64
245	9.14	34.061	4.93	26.38	300	8.40	34.04	4.73	26.48	156	0.72
294	8.52	34.047	4.78	26.47	400	6.75	33.97	3.86	26.66	139	0.88
394	6.84	33.968	3.96	26.65	500	5.39	33.97	2.39	26.84	122	1.01
492	5.46	33.963	2.46	26.82	600	4.61	34.06	1.49	26.99	108	1.14
591	4.65	34.049	1.55	26.98	700	4.22	34.16	0.93	27.11	96	1.24
789	3.91	34.231	0.49	27.21	800	3.88	34.24	0.48	27.22	86	1.34
986	3.39	34.358	0.35	27.36	1000	3.36	34.36	0.36	27.37	72	1.52
1234	2.88	34.447	0.45	27.48	1200	2.94	34.44	0.44	27.46	63	1.67
1480	2.46	34.519	0.72	27.57	1500	2.44	34.52	0.75	27.58	52	1.87
2073	1.91	34.616	1.68	27.69	2000	1.97	34.61	1.58	27.68	42	2.15

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
27	CNAV WHITETHROAT; August 15, 1959; 1624 GCT; 38°35'N, 136°00'W; sounding, 2500 fm; wind, 350°, 12 kt; weather, cloudy; sea, slight.										
0	19.30	33.676	5.44	23.95	0	19.30	33.68	5.44	23.95	397	0.00
10	19.23	33.632	5.50	23.94	10	19.23	33.63	5.50	23.94	398	0.04
20	19.23	33.873	5.57	24.12	20	19.23	33.87	5.57	24.12	380	0.08
30	19.22	33.883	5.97	24.13	30	19.22	33.88	5.97	24.13	380	0.12
50	16.54	33.835	5.99	24.75	50	16.54	33.84	5.99	24.75	320	0.19
75	14.54	33.772	6.00	25.14	75	14.54	33.77	6.00	25.14	283	0.26
100	12.10	33.385	6.18	25.34	100	12.10	33.38	6.18	25.34	264	0.33
125	11.38	33.450	6.70	25.52	125	11.38	33.45	6.70	25.52	247	0.40
150	9.91	33.538	6.64	25.85	150	9.91	33.54	6.64	25.85	216	0.46
175	9.74	33.761	5.12	26.05	175	9.74	33.76	5.12	26.05	197	0.51
200	9.42	33.985	4.23	26.28	200	9.42	33.98	4.23	26.28	175	0.56
225	9.15	34.041	4.44	26.36	250	8.66	34.03	5.01	26.44	160	0.64
250	8.66	34.034	5.01	26.44	300	7.86	34.01	4.23	26.54	150	0.73
300	7.86	34.007	4.23	26.54	400	6.38	33.96	3.73	26.70	135	0.88
400	6.38	33.956	3.73	26.70	500	5.12	33.98	2.37	26.88	118	1.01
500	5.12	33.980	2.37	26.88	600	4.44	34.07	1.36	27.02	105	1.13
600	4.44	34.066	1.36	27.02	700	4.15	34.16	0.88	27.13	94	1.23
800	3.90	34.246	0.47	27.22	800	3.90	34.25	0.47	27.22	86	1.33
1000	3.37	34.362	0.36	27.36	1000	3.37	34.36	0.36	27.36	73	1.51
1250	2.86	34.477	0.56	27.50	1200	2.95	34.46	0.53	27.48	61	1.66
1500	2.40	34.541	0.88	27.59	1500	2.40	34.54	0.88	27.59	51	1.85
2100	1.89	34.624	1.77	27.70	2000	1.96	34.61	1.65	27.69	41	2.13
28	CNAV WHITETHROAT; August 16, 1959; 0358 GCT; 38°27'N, 134°00'W; sounding, 2400 fm; wind, 350°, 15 kt; weather, overcast; sea, slight.										
0	18.70	33.183	5.45	23.73	0	18.70	33.18	5.45	23.73	418	0.00
10	18.60	33.152	5.42	23.73	10	18.60	33.15	5.42	23.73	418	0.04
19	18.16	33.174	5.47	23.86	20	18.12	33.17	5.49	23.87	404	0.08
29	17.80	33.174	5.62	23.94	30	17.77	33.19	5.63	23.96	396	0.12
48	17.36	33.391	5.72	24.22	50	17.15	33.41	5.76	24.28	365	0.20
72	15.19	33.567	6.06	24.85	75	14.92	33.54	6.06	24.89	307	0.28
96	13.28	33.387	6.08	25.11	100	13.01	33.37	6.08	25.15	282	0.36
120	11.80	33.274	6.08	25.31	125	11.60	33.30	5.99	25.37	262	0.43
144	10.90	33.400	5.70	25.57	150	10.63	33.44	5.54	25.65	235	0.49
168	9.86	33.550	5.11	25.86	175	9.53	33.60	5.00	25.96	205	0.55
192	8.77	33.731	4.75	26.18	200	8.67	33.78	4.76	26.23	180	0.60
216	8.48	33.858	4.78	26.33	250	8.12	33.94	4.63	26.44	160	0.68
241	8.23	33.929	4.69	26.42	300	7.50	33.97	4.20	26.56	148	0.76
289	7.66	33.972	4.35	26.54	400	6.22	33.97	2.91	26.74	131	0.91
376	6.54	33.963	3.30	26.69	500	5.14	34.02	1.76	26.91	115	1.04
463	5.45	34.001	1.98	26.85	600	4.57	34.11	1.20	27.04	103	1.16
556	4.70	34.053	1.46	26.98	700	4.32	34.22	0.69	27.15	92	1.26
743	4.22	34.257	0.49	27.19	800	4.07	34.30	0.47	27.24	84	1.36
930	3.76	34.380	0.41	27.34	1000	3.56	34.41	0.44	27.38	71	1.53
1169	3.13	34.463	0.48	27.47	1200	3.07	34.47	0.53	27.48	61	1.68
1411	2.72	34.537	0.78	27.56	1500	2.63	34.54	0.95	27.58	52	1.88
1450	2.71	34.535	0.86	27.56	2000	2.01	34.62	1.66	27.69	41	2.16
1934	2.05	34.614	1.59	27.68	2500	1.71	34.66	2.08	27.74	37	2.40
2420	1.75	34.654	2.02	27.74							
2500	(1.71)a)	(34.660)a)	(2.08)a)	(27.74)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

29

CNAV WHITETHROAT; August 16, 1959; 1729 GCT; 38°20'N, 131°56'W; sounding, 2650 fm; wind, 020°, 15 kt; weather, fog in patches; sea, slight.

0	18.20	33.234	5.49	23.89	0	18.20	33.23	5.49	23.89	402	0.00
10	18.10	33.217	5.49	23.90	10	18.10	33.22	5.49	23.90	402	0.04
19	18.11	33.235	5.53	23.92	20	18.12	33.24	5.52	23.91	400	0.08
28	18.17	33.236	5.49	23.90	30	18.16	33.24	5.48	23.91	400	0.12
47	18.07	33.248	5.43	23.94	50	17.65	33.28	5.51	24.06	386	0.20
71	15.22	33.487	6.00	24.78	75	14.92	33.46	6.01	24.82	314	0.29
95	13.58	33.337	6.07	25.01	100	13.42	33.37	6.01	25.07	290	0.36
119	12.88	33.475	5.84	25.26	125	12.46	33.47	5.76	25.33	265	0.44
142	11.38	33.460	5.57	25.53	150	11.05	33.49	5.45	25.61	239	0.50
166	10.44	33.555	5.24	25.77	175	9.97	33.62	5.11	25.90	211	0.56
190	9.24	33.732	4.88	26.11	200	9.02	33.78	4.76	26.18	184	0.61
213	8.74	33.831	4.60	26.26	250	8.24	33.93	4.40	26.42	162	0.70
237	8.41	33.912	4.45	26.38	300	7.59	33.97	4.09	26.55	149	0.78
285	7.82	33.968	4.30	26.51	400	6.20	33.98	2.80	26.74	131	0.92
361	6.74	33.970	3.32	26.66	500	5.24	34.03	1.68	26.90	116	1.06
452	5.56	33.986	2.18	26.83	600	4.72	34.13	0.99	27.04	103	1.17
541	4.99	34.062	1.29	26.96	700	4.31	34.22	0.54	27.16	92	1.28
718	4.24	34.237	0.46	27.18	800	4.00	34.30	0.41	27.25	83	1.37
902	3.74	34.369	0.36	27.33	1000	3.51	34.41	0.44	27.39	70	1.54
1142	3.21	34.470	0.54	27.46	1200	3.11	34.48	0.62	27.49	60	1.69
1390	2.80	34.529	0.86	27.55	1500	2.62	34.55	0.97	27.58	52	1.89
1920	2.03	34.608	1.33	27.68	2000	1.99	34.62	1.46	27.69	41	2.17
2398	1.80	34.645	2.00	27.72	2500	1.77	34.65	2.08	27.73	38	2.42
2887	1.65	34.668	2.35	27.75	3000	1.63	34.67	2.41	27.76	35	2.65
3376	1.58	34.679	2.60	27.77	3500	1.56	34.68	2.71	27.77	34	2.88
3860	1.52	34.698	3.02	27.79	4000	1.50	34.70	3.14	27.79	32	3.11
4000	(1.50)a)	(34.703)a)	(3.14)a)	(27.79)							

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CNAV WHITETHROAT; August 17, 1959; 0654 GCT; 38°15'N, 130°00'W; sounding, 2500 fm; wind, 020°, 18 kt; weather, overcast; sea, rough.

0	18.20	33.219	5.44	23.88	0	18.20	33.22	5.44	23.88	403	0.00
10	18.37	33.150	5.44	23.79	10	18.37	33.15	5.44	23.79	412	0.04
20	18.38	33.153	5.54	23.79	20	18.38	33.15	5.54	23.79	412	0.08
29	18.42	33.156	5.39	23.78	30	18.34	33.16	5.40	23.80	411	0.12
48	17.21	33.265	5.64	24.16	50	16.92	33.26	5.70	24.22	371	0.20
72	14.28	33.255	6.16	24.80	75	14.04	33.26	6.16	24.85	311	0.29
96	12.60	33.265	6.18	25.15	100	12.45	33.26	6.10	25.17	280	0.36
120	11.78	33.219	5.77	25.27	125	11.51	33.23	5.70	25.33	265	0.43
144	10.58	33.274	5.48	25.53	150	10.26	33.33	5.36	25.63	237	0.50
168	9.38	33.503	5.04	25.91	175	9.21	33.55	4.96	25.97	204	0.55
192	8.82	33.662	4.78	26.12	200	8.71	33.71	4.79	26.17	185	0.60
216	8.51	33.796	4.83	26.27	250	8.12	33.88	4.49	26.40	164	0.69
240	8.30	33.868	4.68	26.36	300	7.32	33.94	3.70	26.56	148	0.77
288	7.48	33.939	3.85	26.54	400	6.12	33.98	2.55	26.76	129	0.92
375	6.45	33.970	2.84	26.70	500	5.15	34.04	1.61	26.92	114	1.05
467	5.31	34.008	1.86	26.88	600	4.70	34.13	1.03	27.05	102	1.16
561	4.88	34.096	1.21	26.99	700	4.28	34.22	0.62	27.16	92	1.27
752	4.08	34.263	0.43	27.21	800	3.97	34.30	0.40	27.26	82	1.36
943	3.68	34.403	0.35	27.37	1000	3.54	34.42	0.44	27.40	69	1.53
1182	3.14	34.486	0.69	27.48	1200	3.10	34.49	0.72	27.49	60	1.68
1421	2.69	34.532	1.02	27.56	1500	2.58	34.54	1.11	27.58	52	1.87
2005	1.98	34.617	1.59	27.69	2000	1.99	34.62	1.59	27.69	41	2.15

a) Value extrapolated by two-point logarithmic method.

POG

NP-59-3

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
31	CNAV WHITETHROAT; August 17, 1959; 1810 GCT; 38°08'N, 128°18'W; sounding, 2500 fm; wind, 010°, 10 kt; weather, overcast; sea, moderate.										
0	17.00	32.745	5.66	23.81	0	17.00	32.74	5.66	23.81	410	0.00
10	16.89	32.720	5.64	23.81	10	16.89	32.72	5.64	23.81	410	0.04
20	16.89	32.719	5.63	23.81	20	16.89	32.72	5.63	23.81	410	0.08
30	16.98	32.718	5.63	23.79	30	16.98	32.72	5.63	23.79	412	0.12
50	15.81	33.048	5.94	24.31	50	15.81	33.05	5.94	24.31	362	0.20
75	14.51	33.273	6.05	24.77	75	14.51	33.27	6.05	24.77	319	0.29
100	13.00	33.229	5.92	25.04	100	13.00	33.23	5.92	25.04	293	0.36
125	11.97	33.230	5.68	25.24	125	11.97	33.23	5.68	25.24	274	0.44
150	10.33	33.376	5.10	25.65	150	10.33	33.38	5.10	25.65	235	0.50
175	8.99	33.641	4.58	26.08	175	8.99	33.64	4.58	26.08	194	0.56
200	8.64	33.782	4.03	26.24	200	8.64	33.78	4.03	26.24	179	0.60
225	8.74	33.965	4.87	26.37	250	8.46	33.98	4.82	26.42	162	0.69
250	8.46	33.978	4.82	26.42	300	7.77	33.98	4.46	26.53	151	0.77
300	7.77	33.985	4.46	26.53	400	6.30	33.99	2.65	26.74	131	0.92
392	6.37	33.980	2.80	26.72	500	5.61	34.10	1.13	26.91	115	1.05
490	5.65	34.094	1.19	26.90	600	5.20	34.18	0.62	27.03	104	1.17
588	5.26	34.173	0.64	27.01	700	4.78	34.26	0.46	27.14	93	1.28
785	4.47	34.324	0.35	27.22	800	4.40	34.33	0.35	27.23	85	1.37
981	3.69	34.401	0.34	27.36	1000	3.65	34.41	0.36	27.37	72	1.55
1226	3.25	34.502	0.64	27.49	1200	3.29	34.49	0.60	27.47	62	1.70
1472	2.75	34.550	0.91	27.57	1500	2.70	34.55	0.95	27.58	52	1.90
1985	2.00	34.610	1.53	27.68	2000	1.98	34.61	1.55	27.68	42	2.18
2000	(1.98)a)	(34.612)a)	(1.55)a)	(27.68)							
32	CNAV WHITETHROAT; August 18, 1959; 0424 GCT; 38°03'N, 126°45'W; sounding, 2400 fm; wind, 010°, 25 kt; weather, partly cloudy; sea, moderate.										
0	16.00	32.628	5.81	23.95	0	16.00	32.63	5.81	23.95	397	0.00
10	16.08	32.582	5.73	23.89	10	16.08	32.58	5.73	23.89	402	0.04
20	16.00	32.591	5.80	23.92	20	16.00	32.59	5.80	23.92	400	0.08
29	15.48	32.612	6.04	24.05	30	15.46	32.61	6.04	24.06	386	0.12
48	15.13	32.647	6.03	24.15	50	14.92	32.66	6.04	24.21	372	0.20
72	13.03	32.748	6.17	24.67	75	12.87	32.76	6.17	24.70	325	0.28
96	11.91	32.829	6.17	24.94	100	11.81	32.87	6.08	24.99	298	0.36
120	11.34	33.057	5.69	25.22	125	11.04	33.10	5.61	25.31	267	0.44
144	10.00	33.227	5.34	25.59	150	9.76	33.30	5.24	25.69	231	0.50
169	9.07	33.519	4.96	25.97	175	8.94	33.58	4.88	26.04	198	0.55
193	8.57	33.768	4.65	26.24	200	8.50	33.80	4.54	26.28	175	0.60
217	8.34	33.877	4.28	26.36	250	7.81	33.94	4.26	26.49	155	0.69
241	7.92	33.929	4.28	26.47	300	7.21	33.98	3.94	26.60	145	0.76
290	7.34	33.971	4.19	26.58	400	6.11	34.02	1.99	26.79	127	0.91
380	6.30	34.003	2.24	26.75	500	5.32	34.10	1.05	26.94	112	1.03
473	5.48	34.069	1.20	26.90	600	4.83	34.18	0.67	27.07	100	1.14
566	4.96	34.153	0.74	27.03	700	4.47	34.25	0.49	27.16	92	1.25
754	4.30	34.279	0.40	27.20	800	4.19	34.31	0.43	27.24	84	1.34
942	3.90	34.402	0.48	27.34	1000	3.77	34.43	0.53	27.38	71	1.52
1181	3.40	34.493	0.67	27.46	1200	3.35	34.50	0.69	27.47	62	1.67
1421	2.81	34.529	0.95	27.55	1500	2.68	34.54	1.05	27.57	53	1.87
2004	2.00	34.610	1.59	27.68	2000	2.00	34.61	1.59	27.68	42	2.16

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV WHITETHROAT; August 18, 1959; 1518 GCT; 37°54'N, 125°10'W; sounding, 2400 fm; wind, 360°, 20 kt; weather, cloudy; sea, moderate.

0	15.70	32.916	5.64	24.23	0	15.70	32.92	5.64	24.23	370	0.00
10	15.72	32.816	4.63	24.15	10	15.72	32.82	4.63	24.15	378	0.04
19	15.72	32.816	5.72	24.15	20	15.73	32.82	5.71	24.15	378	0.08
28	15.76	32.821	5.68	24.15	30	15.39	32.83	5.75	24.24	369	0.11
47	12.80	32.908	6.23	24.83	50	12.58	32.91	6.16	24.88	308	0.18
71	11.32	32.945	5.80	25.14	75	11.07	33.01	5.64	25.24	274	0.26
94	10.01	33.283	5.00	25.63	100	9.97	33.39	4.73	25.72	228	0.32
118	9.88	33.678	4.01	25.96	125	9.74	33.70	3.54	26.00	202	0.37
142	9.44	33.752	2.48	26.09	150	9.29	33.78	2.44	26.14	188	0.42
165	9.02	33.840	2.39	26.23	175	8.88	33.88	2.24	26.28	175	0.47
189	(8.70)a)	33.923	2.04	(26.34)	200	8.57	33.96	2.02	26.40	164	0.51
213	8.42	34.011	1.98	26.46	250	8.04	34.05	2.02	26.55	149	0.59
236	8.20	34.033	2.14	26.51	300	7.57	34.11	1.62	26.66	139	0.67
284	7.67	34.097	1.75	26.63	400	6.95	34.19	1.03	26.81	125	0.81
374	7.16	34.183	1.14	26.77	500	6.18	34.23	0.71	26.94	112	0.93
467	6.46	34.218	0.77	26.90	600	5.52	34.28	0.54	27.07	100	1.05
561	5.72	34.257	0.59	27.02	700	5.06	34.33	0.41	27.16	92	1.15
749	4.86	34.357	0.36	27.20	800	4.66	34.38	0.40	27.24	84	1.25
937	4.19	34.435	0.53	27.34	1000	3.96	34.45	0.56	27.38	71	1.42
1170	3.40	34.490	0.65	27.46	1200	3.33	34.50	0.67	27.47	62	1.58
1406	2.86	34.533	0.80	27.55	1500	2.69	34.55	0.94	27.58	52	1.78
1968	1.99	34.620	1.58	27.69	2000	1.95	34.62	1.61	27.70	40	2.06
2000	(1.95)b)	(34.624)b)	(1.61)b)	(27.70)							

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CNAV WHITETHROAT; August 18, 1959; 2059 GCT; 37°52'N, 124°20'W; sounding, 2100 fm; wind, 310°, 18 kt; weather, clear; sea, moderate.

0	14.10	33.149	6.17	24.76	0	14.10	33.15	6.17	24.76	320	0.00
9	13.90	33.094	6.10	24.76	10	13.89	33.09	6.10	24.76	320	0.03
18	13.86	33.077	6.14	24.75	20	13.84	33.08	6.14	24.76	320	0.06
27	13.76	33.072	6.14	24.77	30	13.18	33.17	6.00	24.96	300	0.10
46	10.68	33.580	5.42	25.75	50	10.29	33.60	5.19	25.83	218	0.15
69	8.73	33.704	4.23	26.17	75	8.66	33.72	4.07	26.19	184	0.20
92	8.47	33.757	3.63	26.25	100	8.35	33.79	3.56	26.29	174	0.24
116	8.13	33.849	3.43	26.37	125	8.01	33.86	3.37	26.40	164	0.29
139	7.84	33.878	3.29	26.44	150	7.80	33.91	3.17	26.47	157	0.33
162	7.76	33.950	3.04	26.51	175	7.58	33.95	3.05	26.53	151	0.37
185	7.45	33.945	3.05	26.55	200	7.23	33.97	3.07	26.60	145	0.40
209	7.11	33.981	3.08	26.62	250	6.63	34.00	2.43	26.70	135	0.48
231	6.92	33.998	2.74	26.66	300	6.03	34.01	1.89	26.79	127	0.55
278	6.24	33.999	2.02	26.75	400	5.36	34.10	1.16	26.95	111	0.67
356	5.54	34.044	1.61	26.88	500	5.00	34.20	0.67	27.07	100	0.78
440	5.22	34.154	0.81	27.00	600	4.70	34.28	0.48	27.16	92	0.88
529	4.90	34.225	0.60	27.09	700	4.46	34.35	0.32	27.25	83	0.98
706	4.45	34.358	0.31	27.25	800	4.18	34.40	0.53	27.31	77	1.07
892	3.95	34.440	0.72	27.37	1000	3.64	34.47	0.76	27.42	67	1.23
1133	3.30	34.497	0.81	27.48	1200	3.17	34.51	0.88	27.50	59	1.38
1380	2.85	34.544	1.06	27.56	1500	2.64	34.56	1.21	27.59	51	1.57
1868	2.09	34.610	1.59	27.67	2000	2.01	34.62	1.75	27.69	41	1.85
2344	1.81	34.650	2.09	27.73	2500	1.76	34.66	2.24	27.74	37	2.09
2821	1.68	34.668	2.50	27.75	3000	1.64	34.67	2.55	27.76	35	2.33
3297	1.59	34.678	2.64	27.77	3500	1.56	34.68	2.70	27.77	34	2.56
3500	(1.56)b)	(34.682)b)	(2.70)b)	(27.77)							

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
35	CNAV WHITETHROAT; August 19, 1959; 0450 GCT; 37°50'N, 123°30'W; sounding, 700 fm; wind, 300°, 20 kt; weather, clear; sea, moderate.										
0	13.50	33.661	5.91	25.28	0	13.50	33.66	5.91	25.28	270	0.00
10	13.38	33.593	5.90	25.25	10	13.38	33.59	5.90	25.25	273	0.03
19	13.40	33.594	5.89	25.24	20	13.13	33.60	5.69	25.30	268	0.06
28	11.24	33.608	4.28	25.67	30	11.15	33.62	4.18	25.70	230	0.08
47	10.49	33.705	3.49	25.88	50	10.38	33.72	3.38	25.91	211	0.12
71	9.77	33.832	2.72	26.10	75	9.73	33.84	2.68	26.11	191	0.18
95	9.58	33.871	2.45	26.16	100	9.54	33.88	2.43	26.18	184	0.22
119	9.40	33.910	2.36	26.22	125	9.37	33.92	2.34	26.23	180	0.27
143	9.28	33.931	2.26	26.26	150	9.22	33.94	2.22	26.27	176	0.32
167	9.09	33.965	2.11	26.31	175	9.04	33.98	2.05	26.33	170	0.36
190	8.96	34.002	1.95	26.36	200	8.84	34.01	1.95	26.39	164	0.40
215	8.68	34.030	1.95	26.43	250	8.21	34.06	1.92	26.52	152	0.48
238	8.28	34.048	1.95	26.51	300	7.78	34.09	1.68	26.61	144	0.56
286	8.00	34.076	1.81	26.57	400	6.56	34.18	0.91	26.85	121	0.70
372	6.81	34.158	1.10	26.80	500	5.84	34.24	0.45	27.00	107	0.82
465	6.05	34.220	0.50	26.95	600	5.26	34.29	0.38	27.10	97	0.93
560	5.50	34.276	0.37	27.06	700	4.74	34.31	0.40	27.18	90	1.03
750	4.50	34.325	0.41	27.22	800	4.33	34.36	0.47	27.26	82	1.13
942	3.90	34.436	0.63	27.37	1000	3.73	34.45	0.65	27.40	69	1.30
1138	3.37	34.475	0.68	27.45	1200	3.22	34.49	0.69	27.48	61	1.44
1200	(3.22)a)	(34.486)a)	(0.69)a)	(27.48)							
36	CNAV WHITETHROAT; August 19, 1959; 0825 GCT; 37°55'N, 123°08'W; sounding, 52 fm; wind, 310°, 30 kt; weather, cloudy; sea, moderate.										
0	13.90	33.769	5.76	25.28	0	13.90	33.77	5.76	25.28	270	0.00
10	13.89	33.646	5.72	25.18	10	13.89	33.65	5.72	25.18	280	0.03
20	13.63	33.662	5.61	25.25	20	13.63	33.66	5.61	25.25	273	0.06
30	11.23	33.649	4.37	25.70	30	11.23	33.65	4.37	25.70	230	0.08
40	10.04	33.678	3.49	25.93	50	9.94	33.72	3.25	25.99	202	0.12
50	9.94	33.725	3.25	25.99	75	9.63	33.76	2.73	26.07	195	0.18
60	9.76	33.739	3.09	26.03							
70	9.73	33.742	2.84	26.04							
80	9.53	33.773	2.63	26.09							
37	CNAV WHITETHROAT; August 22, 1959; 2108 GCT; 38°16'N, 123°36'W; sounding, 520 fm; wind, 330°, 10 kt; weather, patches of shallow fog; sea, moderate.										
0	13.60	33.509	5.94	25.14	0	13.60	33.51	5.94	25.14	283	0.00
10	13.35	33.481	5.99	25.17	10	13.35	33.48	5.99	25.17	280	0.03
20	12.92	33.489	5.98	25.26	20	12.92	33.49	5.98	25.26	272	0.06
30	12.92	33.495	5.94	25.26	30	12.92	33.50	5.94	25.26	272	0.08
49	10.61	33.619	4.19	25.79	50	10.57	33.62	4.14	25.80	221	0.13
74	9.79	33.732	3.23	26.02	75	9.78	33.74	3.19	26.02	200	0.19
98	9.52	33.843	2.58	26.15	100	9.50	33.85	2.54	26.16	186	0.24
123	9.33	33.920	2.22	26.24	125	9.31	33.92	2.21	26.25	178	0.28
147	9.12	33.968	2.05	26.31	150	9.08	33.97	2.04	26.32	171	0.33
172	8.82	33.999	1.98	26.38	175	8.75	34.00	1.99	26.40	164	0.37
196	8.31	34.026	2.03	26.48	200	8.29	34.03	1.99	26.49	155	0.41
221	8.18	34.073	1.80	26.54	250	7.68	34.06	1.77	26.61	144	0.49
245	7.74	34.064	1.79	26.60	300	7.16	34.08	1.53	26.70	135	0.56
294	7.20	34.077	1.58	26.69	400	6.56	34.17	0.92	26.85	121	0.70
384	6.70	34.164	0.99	26.82	500	5.82	34.23	0.58	26.98	109	0.82
480	5.94	34.220	0.62	26.97	600	5.29	34.26	0.45	27.08	99	0.93
577	5.42	34.247	0.46	27.05	700	4.76	34.30	0.38	27.17	91	1.03
770	4.44	34.331	0.35	27.23	800	4.36	34.35	0.37	27.25	83	1.13
914	4.09	34.415	0.45	27.33	1000	3.91	34.46	0.50	27.39	70	1.30
1000	(3.91)a)	(34.459)a)	(0.50)a)	(27.39)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

38

CNAV WHITETHROAT; August 22, 1959; 0625 GCT; 38°32'N, 124°45'W; sounding, 2000 fm; wind, 330°, 15 kt; weather, clear; sea, moderate.

0	13.10	33.071	5.88	24.90	0	13.10	33.07	5.88	24.90	306	0.00
9	12.90	32.976	5.86	24.87	10	12.90	32.98	5.92	24.87	309	0.03
18	12.90	32.977	6.38	24.87	20	12.67	32.98	6.31	24.92	304	0.06
27	11.97	32.996	6.06	25.06	30	11.71	32.99	5.97	25.10	287	0.09
45	10.64	32.968	5.60	25.28	50	10.45	33.01	5.49	25.34	264	0.15
68	9.88	33.119	5.14	25.53	75	9.69	33.20	5.01	25.62	238	0.21
90	9.32	33.347	4.75	25.80	100	9.00	33.45	4.61	25.92	209	0.27
113	8.62	33.561	4.45	26.07	125	8.46	33.62	4.26	26.14	188	0.32
136	8.32	33.669	4.10	26.20	150	8.18	33.73	4.03	26.27	176	0.36
159	8.10	33.768	3.99	26.31	175	7.97	33.82	3.76	26.37	166	0.41
181	7.93	33.831	3.68	26.39	200	7.82	33.91	3.46	26.46	158	0.45
204	7.80	33.922	(3.42)a)	26.48	250	7.02	33.95	2.97	26.61	144	0.53
226	7.42	33.930	(3.19)a)	26.54	300	6.70	34.04	2.09	26.72	133	0.60
272	6.68	33.961	2.78	26.67	400	6.26	34.15	0.94	26.87	119	0.73
342	6.72	34.140	1.16	26.80	500	5.81	34.22	0.65	26.98	109	0.85
433	6.03	34.152	0.83	26.90	600	5.33	34.28	0.48	27.09	98	0.96
525	5.73	34.243	0.58	27.01	700	4.86	34.33	0.37	27.18	90	1.06
710	4.82	34.334	0.36	27.19	800	4.45	34.36	0.38	27.25	83	1.16
900	4.09	34.393	0.40	27.32							

39

CNAV WHITETHROAT; August 23, 1959; 1914 GCT; 40°00'N, 127°00'W; sounding, 2300 fm; wind, 360°, 24 kt; weather, partly cloudy; sea, rough.

0	14.90	32.524	6.00	24.11	0	14.90	32.52	6.00	24.11	382	0.00
10	14.90	32.470	4.84	24.07	10	14.90	32.47	4.84	24.07	385	0.04
20	14.90	32.484	6.13	24.08	20	14.90	32.48	6.13	24.08	384	0.08
30	14.00	32.597	6.38	24.35	30	14.00	32.60	6.38	24.35	359	0.12
49	11.14	32.626	6.45	24.93	50	11.09	32.64	6.42	24.94	302	0.18
74	10.18	32.928	5.69	25.33	75	10.14	32.95	5.63	25.35	263	0.25
98	9.38	33.334	4.52	25.78	100	9.31	33.35	4.48	25.80	221	0.31
123	8.59	33.538	4.08	26.06	125	8.55	33.55	3.94	26.08	194	0.37
148	(8.13)b)	33.684	2.59	(26.24)	150	8.11	33.69	2.69	26.25	178	0.41
172	7.86	33.780	3.70	26.36	175	7.84	33.79	3.64	26.37	166	0.46
197	7.71	33.888	3.24	26.46	200	7.67	33.90	3.19	26.48	156	0.50
221	7.42	33.942	2.87	26.55	250	6.80	33.97	2.79	26.66	139	0.58
246	6.85	33.968	2.84	26.65	300	6.28	34.00	2.12	26.75	130	0.65
296	6.30	33.997	2.15	26.74	400	5.83	34.10	1.44	26.88	118	0.78
371	5.98	34.077	1.61	26.85	500	5.29	34.16	0.91	27.00	107	0.89
467	5.51	34.136	1.09	26.95	600	4.76	34.24	0.56	27.12	95	1.00
563	4.91	34.215	0.59	27.09	700	4.40	34.29	0.47	27.20	88	1.10
755	4.22	34.314	0.43	27.24	800	4.10	34.34	0.45	27.27	81	1.19
1042	3.55	34.456	0.55	27.42	1000	3.64	34.44	0.54	27.40	69	1.36

a) Value interpolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
40	CNAV WHITETHROAT; August 25, 1959; 0620 GCT; 40°39'N, 128°25'W; sounding, 1650 fm; wind, 360°, 13 kt; weather, partly cloudy; sea, moderate.										
0	16.80	32.522	5.41	23.68	0	16.80	32.52	5.41	23.68	422	0.00
10	(16.85)a)	32.502	5.71	(23.66)	10	16.85	32.50	5.71	23.66	424	0.04
20	16.91	32.496	5.81	23.64	20	16.91	32.50	5.81	23.64	426	0.08
30	16.98	32.498	5.63	23.62	30	16.98	32.50	5.63	23.62	428	0.13
50	16.40	32.843	5.82	24.02	50	16.40	32.84	5.82	24.02	390	0.21
74	12.63	32.920	6.47	24.88	75	12.57	32.92	6.45	24.89	307	0.30
98	11.31	32.881	6.09	25.09	100	11.18	32.90	6.03	25.13	284	0.37
123	9.82	33.116	5.32	25.53	125	9.75	33.14	5.25	25.56	243	0.44
148	(9.00)a)	33.409	4.57	(25.89)	150	8.93	33.43	4.54	25.92	209	0.50
172	8.23	33.620	4.24	26.18	175	8.19	33.64	4.21	26.20	183	0.55
197	7.92	33.784	4.02	26.35	200	7.90	33.80	4.02	26.37	166	0.59
221	7.74	33.893	4.04	26.46	250	7.38	33.91	3.62	26.53	151	0.68
246	7.44	33.909	3.68	26.52	300	6.75	33.95	2.90	26.65	140	0.75
296	6.78	33.949	2.93	26.64	400	5.93	33.99	2.02	26.79	127	0.89
366	6.24	33.970	2.42	26.73	500	5.28	34.06	1.15	26.92	114	1.02
455	5.48	34.024	1.43	26.87	600	4.83	34.15	0.73	27.05	102	1.13
544	5.10	34.098	0.90	26.97	700	4.40	34.24	0.47	27.16	92	1.24
725	4.30	34.258	0.41	27.19	800	4.07	34.30	0.36	27.25	83	1.33
908	3.77	34.366	0.29	27.33	1000	3.55	34.41	0.38	27.39	70	1.50
1143	3.25	34.475	0.50	27.46	1200	3.14	34.48	0.57	27.48	61	1.65
1378	2.81	34.514	0.76	27.54	1500	2.61	34.54	0.96	27.57	53	1.85
1949	2.01	34.610	1.59	27.68	2000	1.95	34.62	1.66	27.69	41	2.13
2000	(1.95)b)	(34.617)b)	(1.66)b)	(27.69)							
41	CNAV WHITETHROAT; August 25, 1959; 1746 GCT; 41°04'N, 130°09'W; sounding, missing; wind, 010°, 13 kt; weather, partly cloudy; sea, moderate.										
0	17.10	32.586	5.61	23.66	0	17.10	32.59	5.61	23.66	424	0.00
10	17.30	32.542	5.59	23.58	10	17.30	32.54	5.59	23.58	432	0.04
20	17.30	32.559	5.63	23.59	20	17.30	32.56	5.63	23.59	431	0.09
30	17.32	32.811	5.62	23.78	30	17.32	32.81	5.62	23.78	413	0.13
50	16.62	32.892	5.73	24.01	50	16.62	32.89	5.73	24.01	391	0.21
75	12.76	32.767	6.47	24.73	75	12.76	32.77	6.47	24.73	322	0.30
100	11.66	32.769	6.22	24.94	100	11.66	32.77	6.22	24.94	302	0.38
125	10.63	32.853	5.64	25.19	125	10.63	32.85	5.64	25.19	279	0.45
150	9.30	33.180	4.85	25.67	150	9.30	33.18	4.85	25.67	233	0.52
175	8.54	33.493	4.47	26.03	175	8.54	33.49	4.47	26.03	199	0.57
200	8.04	33.662	3.61	26.24	200	8.04	33.66	3.61	26.24	179	0.62
225	7.80	33.780	3.00	26.37	250	7.51	33.88	2.23	26.49	155	0.71
250	7.51	33.883	2.23	26.49	300	7.18	33.96	1.65	26.60	145	0.78
300	7.18	33.963	1.65	26.60	400	6.42	34.01	1.52	26.74	131	0.93
400	6.42	34.009	1.52	26.74	500	5.61	34.09	1.05	26.90	116	1.06
499	5.62	34.087	1.05	26.90	600	5.05	34.13	0.75	27.00	107	1.18
599	5.06	34.126	0.75	27.00	700	4.57	34.21	0.54	27.12	95	1.29
798	4.15	34.279	0.36	27.22	800	4.14	34.28	0.36	27.22	86	1.39
997	3.68	34.393	0.38	27.36	1000	3.67	34.39	0.38	27.36	73	1.56
1247	3.08	34.474	0.54	27.48	1200	3.18	34.46	0.52	27.46	63	1.72
1497	2.63	34.521	0.81	27.56	1500	2.63	34.52	0.81	27.56	54	1.92
2096	1.93	34.615	1.66	27.69	2000	2.03	34.60	1.53	27.67	43	2.21

a) Value interpolated graphically.

b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

42

CNAV WHITETHROAT; August 26, 1959; 0422 GCT; 41°33'N, 131°48'W; sounding, 2000 fm; wind, 340°, 10 kt; weather, overcast; sea, moderate.

0	17.20	32.988	5.60	23.95	0	17.20	32.99	5.60	23.95	397	0.00
10	17.21	32.951	5.67	23.92	10	17.21	32.95	5.67	23.92	400	0.04
20	17.23	32.960	5.67	23.92	20	17.23	32.96	5.67	23.92	400	0.08
30	17.38	32.995	5.60	23.91	30	17.38	33.00	5.60	23.91	400	0.12
50	12.43	32.942	6.69	24.93	50	12.43	32.94	6.69	24.93	302	0.19
75	10.77	32.952	6.50	25.24	75	10.77	32.95	6.50	25.24	274	0.26
100	9.90	32.957	6.10	25.40	100	9.90	32.96	6.10	25.40	259	0.33
124	9.28	33.111	5.75	25.62	125	9.24	33.12	5.72	25.63	237	0.40
149	8.36	33.439	5.17	26.02	150	8.35	33.44	5.16	26.02	200	0.45
173	8.03	33.566	5.02	26.17	175	8.00	33.58	4.97	26.18	184	0.50
198	7.68	33.726	4.42	26.34	200	7.65	33.74	4.45	26.35	168	0.54
223	7.28	33.840	4.64	26.49	250	6.87	33.90	4.33	26.59	146	0.62
247	6.90	33.898	4.38	26.59	300	6.34	33.91	3.66	26.67	138	0.70
297	6.38	33.909	3.71	26.66	400	5.30	33.95	2.33	26.83	123	0.83
400	5.30	33.947	2.33	26.83	500	5.00	34.10	0.91	26.99	108	0.96
500	5.00	34.102	0.91	26.99	600	4.70	34.17	0.55	27.08	99	1.07
600	4.70	34.174	0.55	27.08	700	4.29	34.24	0.47	27.17	91	1.17
800	3.93	34.295	0.39	27.25	800	3.93	34.30	0.39	27.25	83	1.26
1000	3.44	34.406	0.37	27.39	1000	3.44	34.41	0.37	27.39	70	1.43
1250	2.88	34.478	0.54	27.50	1200	2.98	34.46	0.50	27.48	61	1.58
1500	2.50	34.527	0.74	27.57	1500	2.50	34.53	0.74	27.57	53	1.78
2100	1.88	34.609	1.66	27.69	2000	1.97	34.60	1.52	27.67	43	2.06

43

CNAV WHITETHROAT; August 26, 1959; 1450 GCT; 42°03'N, 133°30'W; sounding, 2100 fm; wind, 340°, 10 kt; weather, overcast; sea, moderate.

0	17.20	32.850	5.77	23.84	0	17.20	32.85	5.77	23.84	407	0.00
10	17.26	32.849	5.68	23.83	10	17.26	32.85	5.68	23.83	408	0.04
20	17.28	32.851	5.80	23.82	20	17.28	32.85	5.80	23.82	409	0.08
30	17.34	32.847	5.67	23.80	30	17.34	32.85	5.67	23.80	411	0.12
50	14.38	32.747	6.36	24.39	50	14.38	32.75	6.36	24.39	355	0.20
75	11.00	32.737	6.89	25.04	75	11.00	32.74	6.89	25.04	293	0.28
100	9.80	32.853	6.27	25.33	100	9.80	32.85	6.27	25.33	265	0.35
125	8.87	33.103	5.48	25.68	125	8.87	33.10	5.48	25.68	232	0.42
150	(8.25)a)	33.440	4.66	(26.03)	150	8.25	33.44	4.66	26.03	199	0.47
175	7.79	33.685	4.42	26.29	175	7.79	33.68	4.42	26.29	174	0.52
200	7.44	33.829	4.27	26.46	200	7.44	33.83	4.27	26.46	158	0.56
225	7.15	33.893	3.61	26.55	250	6.80	33.94	3.42	26.63	142	0.64
250	6.80	33.937	3.42	26.63	300	6.20	33.95	2.88	26.72	133	0.71
300	6.20	33.948	2.88	26.72	400	5.21	33.96	2.13	26.85	121	0.84
394	5.24	33.953	2.20	26.84	500	4.72	34.06	1.23	26.98	109	0.96
493	4.76	34.051	1.27	26.97	600	4.23	34.12	0.83	27.09	98	1.07
591	4.25	34.117	0.85	27.08	700	4.00	34.20	0.62	27.17	91	1.17
788	3.83	34.263	0.45	27.24	800	3.81	34.27	0.45	27.25	83	1.27
985	3.54	34.394	0.38	27.37	1000	3.50	34.40	0.39	27.38	71	1.44
1232	2.95	34.474	0.53	27.49	1200	3.02	34.46	0.50	27.48	61	1.59
1478	2.45	34.532	0.90	27.58	1500	2.42	34.54	0.93	27.59	51	1.78
2000	1.93	34.595	1.61	27.67	2000	1.93	34.60	1.61	27.67	43	2.06
2500	1.70	34.629	2.27	27.72	2500	1.70	34.63	2.27	27.72	38	2.32
3000	1.59	34.654	2.59	27.75	3000	1.59	34.65	2.59	27.75	36	2.55
3500	1.55	34.671	2.76	27.76	3500	1.55	34.67	2.76	27.76	35	2.79

a) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
44	CNAV WHITETHROAT; August 27, 1959; 0110 GCT; 43°02'N, 132°59'W; sounding, 1950 fm; wind, 330°, 4 kt; weather, intermittent slight drizzle; sea, moderate.										
0	17.10	32.748	5.69	23.79	0	17.10	32.75	5.69	23.79	412	0.00
10	17.10	32.750	5.66	23.79	10	17.10	32.75	5.66	23.79	412	0.04
20	17.05	32.753	5.70	23.80	20	17.05	32.75	5.70	23.80	411	0.08
30	17.08	32.750	5.66	23.79	30	17.08	32.75	5.66	23.79	412	0.12
50	14.69	32.719	6.06	24.30	50	14.69	32.72	6.06	24.30	363	0.20
75	11.32	32.718	6.69	24.96	75	11.32	32.72	6.69	24.96	300	0.29
100	9.54	32.924	5.60	25.43	100	9.54	32.92	5.60	25.43	256	0.36
125	8.84	32.905	5.02	25.53	125	8.84	32.90	5.02	25.53	246	0.42
150	8.19	33.106	3.99	25.78	150	8.19	33.11	3.99	25.78	222	0.48
175	7.98	33.555	3.32	26.16	175	7.98	33.56	3.32	26.16	186	0.53
200	7.78	33.833	2.93	26.41	200	7.78	33.83	2.93	26.41	163	0.58
225	7.54	33.886	2.78	26.49	250	7.18	33.94	2.48	26.58	146	0.66
250	7.18	33.940	2.48	26.58	300	6.74	33.98	2.04	26.67	138	0.73
300	6.74	33.978	2.04	26.67	400	5.90	34.04	1.40	26.83	123	0.87
398	5.91	34.043	1.41	26.83	500	5.36	34.11	0.90	26.95	111	0.99
497	5.37	34.108	0.91	26.95	600	4.98	34.17	0.56	27.04	103	1.10
596	5.00	34.166	0.56	27.04	700	4.55	34.23	0.46	27.14	93	1.21
794	4.20	34.288	0.38	27.22	800	4.18	34.29	0.38	27.23	85	1.31
992	3.70	34.387	0.30	27.35	1000	3.68	34.39	0.30	27.36	73	1.48
1240	3.08	34.472	0.43	27.48	1200	3.17	34.46	0.40	27.46	63	1.64
1488	2.61	34.516	0.66	27.56	1500	2.59	34.52	0.68	27.56	54	1.84
1984	2.00	34.608	1.46	27.68	2000	1.99	34.61	1.48	27.68	42	2.13
2579	1.72	34.637	2.12	27.72	2500	1.75	34.63	2.04	27.72	38	2.38
45	CNAV WHITETHROAT; August 27, 1959; 1017 GCT; 44°01'N, 132°31'W; sounding, 1950 fm; wind, 330°, 7 kt; weather, intermittent slight drizzle; sea, slight.										
0	16.30	32.637	5.70	23.89	0	16.30	32.64	5.70	23.89	402	0.00
10	16.38	32.646	5.68	23.87	10	16.38	32.65	5.68	23.87	404	0.04
19	16.41	32.660	5.71	23.88	20	16.20	32.66	5.76	23.93	399	0.08
28	14.72	32.662	6.06	24.25	30	14.22	32.65	6.17	24.35	359	0.12
48	10.60	32.569	6.97	24.98	50	10.45	32.58	6.91	25.01	296	0.18
72	9.10	32.657	6.42	25.29	75	8.99	32.69	6.31	25.33	265	0.26
97	8.26	32.870	5.62	25.59	100	8.17	32.92	5.53	25.64	236	0.32
122	7.60	33.245	4.97	25.98	125	7.58	33.28	4.94	26.01	201	0.38
146	7.46	33.516	4.74	26.21	150	7.42	33.56	4.68	26.24	179	0.42
171	7.25	33.744	4.42	26.42	175	7.25	33.78	4.38	26.45	159	0.47
182	7.24	33.847	4.31	26.50	200	6.97	33.88	4.09	26.56	148	0.51
205	6.90	33.886	4.03	26.58	250	6.46	33.90	3.47	26.65	140	0.58
227	6.63	33.898	3.49	26.62	300	6.05	33.94	3.09	26.73	132	0.65
272	6.32	33.912	3.45	26.67	400	5.23	34.00	2.05	26.88	118	0.78
500	4.60	34.056	1.23	26.99	500	4.60	34.06	1.23	26.99	108	0.90
600	4.30	34.158	0.59	27.11	600	4.30	34.16	0.59	27.11	96	1.01
800	3.81	34.318	0.31	27.29	700	4.04	34.24	0.45	27.20	88	1.11
1000	3.46	34.410	0.36	27.39	800	3.81	34.32	0.31	27.29	79	1.20
1250	2.90	34.478	0.47	27.50	1000	3.46	34.41	0.36	27.39	70	1.36
1500	2.43	34.530	0.77	27.58	1200	3.00	34.47	0.45	27.48	61	1.51
					1500	2.43	34.53	0.77	27.58	52	1.71

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV WHITETHROAT; August 27, 1959; 1938 GCT; 45°00'N, 132°00'W; sounding, 1950 fm; wind, 320°, 10 kt; weather, cloudy; sea, slight.

0	16.00	32.683	5.77	23.99	0	16.00	32.68	5.77	23.99	393	0.00
10	15.97	32.672	5.70	23.99	10	15.97	32.67	5.70	23.99	393	0.04
20	15.99	32.661	5.75	23.97	20	15.99	32.66	5.75	23.97	395	0.08
30	15.14	32.657	5.99	24.16	30	15.14	32.66	5.99	24.16	377	0.12
50	10.94	32.667	6.73	24.99	50	10.94	32.67	6.73	24.99	298	0.19
75	9.11	32.697	6.56	25.32	75	9.11	32.70	6.56	25.32	266	0.26
100	8.32	32.760	6.22	25.49	100	8.32	32.76	6.22	25.49	250	0.32
125	7.94	32.974	5.66	25.71	125	7.94	32.97	5.66	25.71	229	0.38
150	7.46	33.317	5.21	26.05	150	7.46	33.32	5.21	26.05	197	0.44
175	7.19	33.516	4.83	26.25	175	7.19	33.52	4.83	26.25	178	0.48
200	6.92	33.713	4.27	26.44	200	6.92	33.71	4.27	26.44	160	0.53
225	6.71	33.809	3.96	26.54	250	6.52	33.85	3.74	26.60	145	0.61
250	6.52	33.850	(3.74)a)	26.60	300	5.92	33.89	3.34	26.71	134	0.68
300	5.92	33.894	3.34	26.71	400	4.96	33.99	1.51	26.90	116	0.81
397	4.98	33.991	1.53	26.90	500	4.48	34.08	0.96	27.03	104	0.92
496	4.49	34.082	0.99	27.03	600	4.14	34.16	0.56	27.13	94	1.03
595	4.15	34.161	0.56	27.13	700	3.98	34.24	0.47	27.20	88	1.13
794	3.84	34.295	0.40	27.26	800	3.82	34.30	0.40	27.27	81	1.22
993	3.37	34.400	0.37	27.39	1000	3.35	34.40	0.37	27.40	69	1.38
1242	2.87	34.474	0.46	27.50	1200	2.95	34.46	0.45	27.48	61	1.53
1490	2.43	34.535	0.54	27.59	1500	2.42	34.54	0.56	27.59	51	1.73
1988	1.94	34.605	1.43	27.68	2000	1.94	34.61	1.44	27.68	42	2.00
2484	1.76	34.628	1.85	27.71	2500	1.76	34.63	1.87	27.71	39	2.26
2980	1.63	34.637	2.42	27.73	3000	1.63	34.64	2.44	27.73	38	2.50
3000	(1.63)b)	(34.637)b)	(2.44)b)	(27.73)							

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CNAV WHITETHROAT; August 28, 1959; 0501 GCT; 45°34'N, 130°54'W; sounding, 1400 fm; wind, 320°, 10 kt; weather, cloudy; sea, moderate.

0	15.90	32.467	5.86	23.85	0	15.90	32.47	5.86	23.85	406	0.00
10	16.05	32.481	5.84	23.82	10	16.05	32.48	5.84	23.82	409	0.04
20	16.09	32.477	5.87	23.81	20	16.09	32.48	5.87	23.81	410	0.08
30	16.08	32.469	5.87	23.81	30	16.08	32.47	5.87	23.81	410	0.12
50	14.84	32.501	6.20	24.10	50	14.84	32.50	6.20	24.10	382	0.20
75	9.28	32.605	6.84	25.22	75	9.28	32.60	6.84	25.22	276	0.29
100	8.24	32.667	6.43	25.43	100	8.24	32.67	6.43	25.43	256	0.35
125	7.67	33.132	5.13	25.88	125	7.67	33.13	5.13	25.88	213	0.41
150	7.18	33.430	4.92	26.18	150	7.18	33.43	4.92	26.18	184	0.46
175	6.89	33.684	4.44	26.42	175	6.89	33.68	4.44	26.42	162	0.51
200	6.70	33.792	4.17	26.53	200	6.70	33.79	4.17	26.53	151	0.55
225	6.44	33.852	3.82	26.61	250	6.16	33.88	3.51	26.67	138	0.62
250	6.16	33.878	3.51	26.67	300	5.56	33.91	2.96	26.77	128	0.69
297	5.56	33.904	3.12	26.76	400	4.95	33.98	1.69	26.89	117	0.82
300	5.56	33.907	2.96	26.77	500	4.53	34.06	0.94	27.00	107	0.94
397	4.96	33.977	1.71	26.89	600	4.18	34.15	0.72	27.11	96	1.04
496	4.55	34.053	0.95	27.00	700	3.89	34.23	0.53	27.21	87	1.14
695	3.90	34.222	0.53	27.20	800	3.72	34.34	0.46	27.31	77	1.23
894	3.58	34.435	0.40	27.40	1000	3.33	34.46	0.40	27.45	64	1.39
1142	3.04	34.501	0.40	27.51	1200	2.93	34.51	0.48	27.52	57	1.52
1390	2.59	34.526	0.71	27.57	1500	2.44	34.54	0.88	27.59	51	1.72
1887	2.00	34.569	1.42	27.65	2000	1.96	34.58	1.53	27.66	44	2.00
2382	1.82	34.620	1.88	27.70	2500	1.78	34.63	1.98	27.71	39	2.26
2500	(1.78)b)	(34.631)b)	(1.98)b)	(27.71)							

a) Value interpolated by two-point logarithmic method.
b) Value extrapolated by two-point logarithmic method.

POG

NP-59-3

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
48	CNAV WHITETHROAT; August 28, 1959; 1325 GCT; 46°09'N, 129°47'W; sounding, 1150 fm; wind, 320°, 10 kt; weather, overcast; sea, slight.										
0	16.20	32.411	5.69	23.74	0	16.20	32.41	5.69	23.74	417	0.00
10	16.20	32.416	5.64	23.74	10	16.20	32.42	5.64	23.74	417	0.04
20	16.24	32.425	5.60	23.74	20	16.24	32.42	5.60	23.74	417	0.08
30	16.16	32.421	5.69	23.75	30	16.16	32.42	5.69	23.75	416	0.13
50	15.24	32.459	5.69	23.98	50	15.24	32.46	5.69	23.98	394	0.21
75	9.55	32.524	6.64	25.12	75	9.55	32.52	6.64	25.12	285	0.29
100	8.21	32.851	5.44	25.58	100	8.21	32.85	5.44	25.58	242	0.36
125	7.56	33.234	4.60	25.97	125	7.56	33.23	4.60	25.97	204	0.42
150	7.13	33.568	4.17	26.30	150	7.13	33.57	4.17	26.30	173	0.46
175	6.76	33.749	3.96	26.49	175	6.76	33.75	3.96	26.49	155	0.51
200	6.76	33.829	3.54	26.55	200	6.76	33.83	3.54	26.55	149	0.54
225	6.46	33.877	3.40	26.63	250	6.12	33.91	2.92	26.70	135	0.62
250	6.12	33.913	2.92	26.70	300	5.62	33.94	2.13	26.78	128	0.69
300	5.62	33.939	2.13	26.78	400	5.00	34.00	1.41	26.91	115	0.81
396	5.02	33.997	1.43	26.90	500	4.55	34.08	0.88	27.02	105	0.93
496	4.56	34.082	0.90	27.02	600	4.25	34.16	0.63	27.12	95	1.04
595	4.27	34.161	0.64	27.11	700	3.95	34.23	0.48	27.20	88	1.13
794	3.71	34.276	0.37	27.26	800	3.70	34.28	0.37	27.27	81	1.23
992	3.35	34.386	0.39	27.38	1000	3.33	34.39	0.39	27.39	70	1.39
1240	2.84	34.482	0.52	27.51	1200	2.92	34.47	0.49	27.49	60	1.54
1589	2.27	34.542	0.85	27.60	1500	2.40	34.53	0.77	27.58	52	1.73
49	CNAV WHITETHROAT; August 28, 1959; 2105 GCT; 46°42'N, 128°40'W; sounding, 1400 fm; wind, 220°, 3 kt; weather, cloudy; sea, smooth.										
0	16.70	32.476	5.63	23.67	0	16.70	32.48	5.63	23.67	423	0.00
10	(16.50)a)	32.473	5.62	(23.71)	10	16.50	32.47	5.62	23.71	420	0.04
20	16.40	32.494	5.63	23.75	20	16.40	32.49	5.63	23.75	416	0.08
30	16.32	32.514	5.67	23.79	30	16.32	32.51	5.67	23.79	412	0.13
50	11.62	32.519	7.02	24.76	50	11.62	32.52	7.02	24.76	320	0.20
75	9.28	32.580	6.63	25.20	75	9.28	32.58	6.63	25.20	278	0.28
100	8.76	32.643	6.28	25.33	100	8.76	32.64	6.28	25.33	265	0.34
125	8.02	33.083	4.92	25.79	125	8.02	33.08	4.92	25.79	222	0.40
150	7.34	33.428	4.47	26.16	150	7.34	33.43	4.47	26.16	186	0.46
175	7.19	33.714	3.85	26.40	175	7.19	33.71	3.85	26.40	164	0.50
200	6.82	33.853	3.60	26.56	200	6.82	33.85	3.60	26.56	148	0.54
225	6.61	33.896	3.25	26.62	250	6.32	33.91	2.90	26.67	138	0.62
250	6.32	33.910	2.90	26.67	300	5.91	33.96	2.00	26.76	129	0.68
300	5.91	33.959	2.00	26.76	400	5.38	34.01	1.42	26.87	119	0.81
400	5.38	34.009	1.42	26.87	500	4.68	34.06	1.08	26.99	108	0.93
500	4.68	34.061	1.08	26.99	600	4.38	34.15	0.55	27.10	97	1.04
600	4.38	34.154	0.55	27.10	700	4.13	34.23	0.45	27.18	90	1.14
800	3.91	34.291	0.36	27.25	800	3.91	34.29	0.36	27.25	83	1.24
1000	3.50	34.403	0.41	27.38	1000	3.50	34.40	0.41	27.38	71	1.41
1247	2.94	34.465	0.52	27.49	1200	3.04	34.45	0.49	27.47	62	1.56
1496	2.45	34.507	0.73	27.56	1500	2.45	34.51	0.74	27.56	54	1.76
1995	1.93	34.583	1.48	27.66	2000	1.93	34.58	1.49	27.67	43	2.05
2000	(1.93)b)	(34.584)b)	(1.49)b)	(27.67)							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

50

CNAV WHITETHROAT; August 29, 1959; 0608 GCT; 47°15'N, 127°32'W; sounding, 1390 fm; wind, calm; weather, clear; sea, smooth.

0	16.50	32.280	5.70	23.57	0	16.50	32.28	5.70	23.57	433	0.00
10	(16.30)a)	32.280	5.66	(23.61)	10	16.30	32.28	5.66	23.61	429	0.04
20	16.07	32.292	5.78	23.67	20	16.07	32.29	5.78	23.67	423	0.09
30	13.38	32.390	6.62	24.32	30	13.38	32.39	6.62	24.32	361	0.13
50	10.08	32.481	7.10	25.00	50	10.08	32.48	7.10	25.00	297	0.19
75	8.84	32.814	5.50	25.45	75	8.84	32.81	5.50	25.45	254	0.26
100	8.48	33.280	4.22	25.87	100	8.48	33.28	4.22	25.87	214	0.32
125	(8.20)a)	33.591	3.35	(26.16)	125	8.20	33.59	3.35	26.16	186	0.37
150	7.95	33.715	3.09	26.29	150	7.95	33.72	3.09	26.29	174	0.42
175	7.77	33.806	2.73	26.39	175	7.77	33.81	2.73	26.39	164	0.46
200	7.53	33.872	2.59	26.48	200	7.53	33.87	2.59	26.48	156	0.50
225	7.26	33.922	2.42	26.56	250	6.98	33.94	2.48	26.61	144	0.58
250	6.98	33.942	2.48	26.61	300	6.49	33.96	2.15	26.69	136	0.65
300	6.49	33.962	2.15	26.69	400	5.79	34.03	1.40	26.83	123	0.79
393	5.86	34.030	1.41	26.83	500	4.94	34.04	1.18	26.95	111	0.91
492	4.98	34.037	1.22	26.94	600	4.55	34.13	0.68	27.06	101	1.02
590	4.57	34.118	0.69	27.05	700	4.33	34.20	0.55	27.13	94	1.13
787	4.17	34.250	0.45	27.19	800	4.14	34.26	0.45	27.21	87	1.23
984	3.72	34.377	0.44	27.34	1000	3.66	34.38	0.45	27.35	74	1.40
1230	2.95	34.483	0.52	27.50	1200	3.04	34.47	0.50	27.48	61	1.56
1475	2.50	34.527	0.75	27.57	1500	2.47	34.53	0.80	27.58	52	1.75
2066	1.87	34.605	1.64	27.69	2000	1.93	34.60	1.55	27.68	42	2.04

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CNAV WHITETHROAT; August 29, 1959; 1350 GCT; 47°45'N, 126°27'W; sounding, 1200 fm; wind, 170°, 2 kt; weather, partly cloudy; sea, smooth.

0	15.80	32.281	5.98	23.73	0	15.80	32.28	5.98	23.73	418	0.00
10	15.58	32.277	5.94	23.77	10	15.58	32.28	5.94	23.77	414	0.04
20	15.36	32.299	6.03	23.84	20	15.36	32.30	6.03	23.84	407	0.08
30	14.12	32.298	6.35	24.10	30	14.12	32.30	6.35	24.10	382	0.12
50	9.32	32.505	6.88	25.14	50	9.32	32.50	6.88	25.14	283	0.19
75	7.94	32.618	6.52	25.44	75	7.94	32.62	6.52	25.44	255	0.26
100	7.82	32.989	5.19	25.74	100	7.82	32.99	5.19	25.74	226	0.32
125	7.88	33.416	4.30	26.07	125	7.88	33.42	4.30	26.07	195	0.37
150	7.48	33.630	3.77	26.30	150	7.48	33.63	3.77	26.30	173	0.42
175	7.24	33.795	3.39	26.46	175	7.24	33.80	3.39	26.46	158	0.46
200	7.03	33.858	3.21	26.54	200	7.03	33.86	3.21	26.54	150	0.50
225	6.77	33.904	2.90	26.61	250	6.51	33.94	2.62	26.67	138	0.58
250	6.51	33.938	2.62	26.67	300	6.00	33.96	2.03	26.76	129	0.64
300	6.00	33.964	2.03	26.76	400	5.29	34.04	1.28	26.90	116	0.77
388	5.35	34.031	1.33	26.89	500	4.86	34.12	0.88	27.01	106	0.89
486	4.92	34.107	0.95	27.00	600	4.48	34.18	0.52	27.11	96	1.00
582	4.54	34.171	0.53	27.09	700	4.19	34.25	0.43	27.19	89	1.10
778	3.99	34.295	0.37	27.25	800	3.93	34.31	0.37	27.26	82	1.19
972	3.50	34.392	0.38	27.37	1000	3.43	34.40	0.40	27.39	70	1.36
1216	2.97	34.467	0.55	27.48	1200	3.00	34.46	0.54	27.48	61	1.51
1460	2.53	34.527	0.87	27.57	1500	2.48	34.53	0.94	27.58	52	1.70
2044	1.87	34.609	1.66	27.69	2000	1.91	34.60	1.60	27.68	42	1.98

a) Value interpolated graphically.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
52	CNAV WHITETHROAT; August 29, 1959; 1846 GCT; 48°01'N, 125°52'W; sounding, 385 fm; wind, 160°, 3 kt; weather, partly cloudy; sea, smooth.											
	0	15.70	32.109	5.96	23.62	0	15.70	32.11	5.96	23.62	428	0.00
	10	14.87	32.086	6.05	23.78	10	14.87	32.09	6.05	23.78	413	0.04
	20	12.12	32.443	6.60	24.60	20	12.12	32.44	6.60	24.60	335	0.08
	30	9.44	32.523	6.54	25.13	30	9.44	32.52	6.54	25.13	284	0.11
	50	8.14	32.622	6.19	25.41	50	8.14	32.62	6.19	25.41	258	0.17
	75	7.98	32.847	5.35	25.61	75	7.98	32.85	5.35	25.61	239	0.23
	100	7.84	33.336	4.12	26.01	100	7.84	33.34	4.12	26.01	201	0.28
	125	7.66	33.585	3.67	26.23	125	7.66	33.58	3.67	26.23	180	0.33
	150	7.49	33.774	3.00	26.41	150	7.49	33.77	3.00	26.41	163	0.38
	175	7.14	33.943	2.58	26.59	175	7.14	33.94	2.58	26.59	146	0.42
	200	6.80	33.893	2.12	26.60	200	6.80	33.89	2.12	26.60	145	0.45
	225	6.51	33.971	1.93	26.70	250	6.37	33.98	1.87	26.72	133	0.52
	250	6.37	33.984	1.87	26.72	300	6.23	34.00	1.65	26.76	129	0.59
	300	6.23	34.005	1.65	26.76	400	5.88	34.03	1.31	26.83	123	0.72
	400	5.88	34.034	1.31	26.83	500	5.37	34.09	0.93	26.94	112	0.85
	500	5.37	34.094	0.93	26.94	600	4.95	34.15	0.66	27.03	104	0.96
	600	4.95	34.154	0.66	27.03							
	650	4.68	34.187	0.52	27.09							
53	CNAV WHITETHROAT; August 29, 1959; 2138 GCT; 48°11'N, 125°30'W; sounding, 72 fm; wind, 120°, 1 kt; weather, partly cloudy; sea, smooth.											
	0	15.50	31.459	7.13	23.16	0	15.50	31.46	7.13	23.16	472	0.00
	10	10.84	32.081	5.33	24.56	10	10.84	32.08	5.33	24.56	339	0.04
	20	8.90	32.614	6.29	25.29	20	8.90	32.61	6.29	25.29	269	0.07
	30	8.05	32.642	6.26	25.44	30	8.05	32.64	6.26	25.44	255	0.10
	50	7.47	32.822	5.75	25.66	50	7.47	32.82	5.75	25.66	234	0.15
	75	7.30	33.188	4.49	25.97	75	7.30	33.19	4.49	25.97	204	0.20
	100	7.38	33.638	3.58	26.32	100	7.38	33.64	3.58	26.32	171	0.25
	125	7.36	33.813	2.96	26.46	125	7.36	33.81	2.96	26.46	158	0.29

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CNAV OSHAWA; November 16, 1959; 2336 GCT;[a] 48°33'N, 123°33'W; sounding, 110 fm; wind, 040°, 10 kt; weather, cloudy; sea, missing.											1
0	8.80	28.685	6.03	22.24	0	8.80	28.68	6.03	22.24	560b)	0.00
2	8.75	28.668	6.07	22.23	10	8.76	28.67	5.68	22.23	561	0.06
6	8.73	28.670	5.76	22.24	20	8.96	28.72	5.50	22.25	559	0.11
10	8.76	28.672	5.68	22.23	30	10.65	29.61	2.44	22.67	519	0.17
20	8.96	28.724	5.50	22.25	50	9.82	30.16	2.22	23.23	465	0.27
30	10.65	29.612	2.44	22.67	75	9.42	30.62	0.97	23.65	425	0.38
50	9.82	30.158	2.22	23.23	100	9.16	30.96	0.37	23.96	396	0.48
75	9.42	30.616	0.97	23.65	125	9.11	31.12	0.36	24.09	383	0.58
100	9.16	30.964	0.37	23.96	150	9.10	31.18	0.15	24.14	379	0.68
125	9.11	31.117	0.36	24.09	175	9.11	31.23	0.00	24.17	376	0.77
150	9.10	31.185	0.15	24.14	200	9.13	31.25	0.00	24.19	374	0.87
175	9.11	31.227	0.00	24.17							
200	9.13	31.247	0.00	24.19							
CNAV OSHAWA; November 17, 1959; 0059 GCT; 48°34'N, 123°30'W; sounding, 110 fm; wind, 040°, 10 kt; weather, cloudy; sea, slight.											2
0	8.70	28.707	5.71	22.27	0	8.70	28.71	5.71	22.27	557	0.00
2	8.66	28.704	5.87	22.27	10	8.70	28.69	5.64	22.26	558	0.06
6	8.68	28.693	5.87	22.26	20	8.74	28.70	5.61	22.26	558	0.11
10	8.70	28.691	5.64	22.43	30	10.38	29.68	2.63	22.77	509	0.17
20	8.74	28.696	5.61	22.26	50	9.88	30.07	2.26	23.15	473	0.26
30	10.38	29.678	2.63	22.77	75	9.31	30.61	2.08	23.67	423	0.38
50	9.88	30.067	2.26	23.15	100	9.14	31.05	0.26	24.03	389	0.48
75	9.31	30.614	2.08	23.67	125	9.10	31.15	0.00	24.12	380	0.58
100	9.14	31.048	0.26	24.03	150	9.14	31.20	0.00	24.15	378	0.68
125	9.10	31.152	0.00	24.12	175	9.10	31.23	0.00	24.18	375	0.77
150	9.14	31.197	0.00	24.15	200	9.11	31.25	0.00	24.19	374	0.86
175	9.10	31.227	0.00	24.18							
200	9.11	(31.253)c)	0.00	(24.19)							
CNAV OSHAWA; November 17, 1959; 0300 GCT; 48°44'N, 123°33'W; sounding, missing; wind, missing; weather, cloudy; sea, smooth.											3
0	8.30	27.578	5.81	21.45	0	8.30	27.58	5.81	21.45	636	0.00
2	8.32	28.131	5.32	21.87	10	9.15	29.09	4.65	22.50	535	0.06
6	8.81	28.914	5.11	22.42	20	9.33	29.41	4.33	22.73	513	0.11
10	9.15	29.090	4.65	22.50	30	9.29	29.67	4.14	22.93	494	0.16
20	9.33	29.411	4.33	22.73	50	8.94	30.06	4.22	23.29	460	0.26
30	9.29	29.669	4.14	22.93	75	8.70	30.48	4.31	23.66	424	0.37
50	8.94	30.061	4.22	23.29							
85	8.62	30.617	4.35	23.77							
CNAV OSHAWA; November 17, 1959; 0405 GCT; 48°41'N, 123°30'W; sounding, 35 fm; wind, 360°, 10 kt; weather, moderate showers of rain and snow; sea, smooth.											4
0	7.80	28.376	6.00	22.14	0	7.80	28.38	6.00	22.14	570	0.00
2	7.98	28.407	5.85	22.14	10	8.66	28.84	5.43	22.38	547	0.06
6	7.99	28.427	5.76	22.15	20	9.60	29.19	4.22	22.51	534	0.11
10	8.66	28.840	5.43	22.38	30	10.19	29.47	3.60	22.64	522	0.16
20	9.60	29.191	4.22	22.51	50	9.72	29.87	3.43	23.02	486	0.27
30	10.19	29.470	3.60	22.64							
40	10.10	29.523	3.53	22.69							
60	9.39	30.157	3.35	23.30							

a) At inshore stations observations were made to a maximum depth of 400 meters. At offshore stations data were collected to a depth of 1500 meters. Although not indicated in the tabulation, two casts were made, the first to 300 meters. The time reported is the time of the messenger release of the shallow cast. On the deep stations (over 400 meters) the messenger for the deep cast was usually released 30 to 40 minutes later.

b) Values of thermosteric anomaly were computed by the Data Collecting and Processing Group of Scripps Institution.

c) Value extrapolated by two-point logarithmic method.

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
5	CNAV OSHAWA; November 17, 1959; 0610 GCT; 48°38'N, 123°30'W; sounding, 102 fm; wind, 320°, 10 kt; weather, moderate rain; sea, missing.										
0	8.40	28.504	6.36	22.15	0	8.40	28.50	6.36	22.15	569	0.00
10	8.52	28.697	5.52	22.29	10	8.52	28.70	5.52	22.29	555	0.06
50	9.25	29.922	4.00	23.14	20	8.79	29.15	4.96	22.60	526	0.11
100	9.21	31.043	0.00	24.02	30	8.98	29.47	4.56	22.82	505	0.16
150	9.17	31.186	0.00	24.13	50	9.25	29.92	4.00	23.14	474	0.26
180	9.11	31.227	0.00	24.17	75	9.23	30.57	1.70	23.64	426	0.38
					100	9.21	31.04	0.00	24.02	390	0.48
					125	9.19	31.12	0.00	24.08	384	0.58
					150	9.17	31.19	0.00	24.13	380	0.67
					175	9.12	31.22	0.00	24.17	376	0.77
6	CNAV OSHAWA; November 18, 1959; 1722 GCT; 48°46'N, 123°03'W; sounding, 100 fm; wind, 340°, 5 kt; weather, overcast; sea, slight.										
0	8.50	30.522	4.86	23.72	0	8.50	30.52	4.86	23.72	419	0.00
2	8.51	30.525	4.70	23.72	10	8.49	30.52	4.59	23.72	419	0.04
6	8.50	30.524	4.58	23.72	20	8.48	30.59	4.51	23.77	414	0.08
10	8.49	30.525	4.59	23.72	30	8.42	30.73	4.48	23.89	402	0.12
20	8.48	30.593	4.51	23.77	50	8.40	30.80	4.45	23.95	397	0.21
30	8.42	30.730	4.48	23.89	75	8.36	30.93	4.39	24.06	386	0.30
50	8.40	30.799	4.45	23.95	100	8.24	31.38	4.07	24.42	352	0.40
75	8.36	30.931	4.39	24.06	125	8.20	31.40	4.01	24.45	349	0.49
100	8.24	31.375	4.07	24.42	150	8.22	31.73	3.76	24.70	325	0.57
125	8.20	31.401	4.01	24.45	175	8.14	31.92	3.73	24.86	310	0.65
150	8.22	31.733	3.76	24.70							
180	8.12	31.959	3.73	24.89							
7	CNAV OSHAWA; November 18, 1959; 1806 GCT; 48°44'N, 122°58'W; sounding, 75 fm; wind, 040°, 5 kt; weather, overcast; sea, slight.										
0	8.70	30.475	4.84	23.65	0	8.70	30.48	4.84	23.65	425	0.00
2	8.50	30.458	4.76	23.67	10	8.48	30.49	4.76	23.69	422	0.04
6	8.50	30.465	4.67	23.67	20	8.48	30.48	4.64	23.69	422	0.08
10	8.48	30.490	4.76	23.69	30	8.46	30.49	4.64	23.70	421	0.13
20	8.48	30.484	4.64	23.69	50	8.48	30.54	4.68	23.73	418	0.21
30	8.46	30.491	4.64	23.70	75	8.44	30.61	4.55	23.79	412	0.32
50	8.48	30.538	4.68	23.73	100	8.39	30.74	4.52	23.90	402	0.42
75	8.44	30.606	4.55	23.79	125	8.39	30.75	4.48	23.91	400	0.52
100	8.39	30.735	4.52	23.90							
125	8.39	30.746	4.48	23.91							
8	CNAV OSHAWA; November 18, 1959; 1903 GCT; 48°41'N, 122°47'W; sounding, 60 fm; wind, missing; weather, fog in patches; sea, missing.										
0	8.50	30.438	5.05	23.65	0	8.50	30.44	5.05	23.65	425	0.00
2	8.47	30.466	4.77	23.68	10	8.43	30.47	4.84	23.69	422	0.04
6	8.47	30.466	4.84	23.68	20	8.40	30.48	4.69	23.70	421	0.08
10	8.43	30.472	4.84	23.69	30	8.47	30.52	4.64	23.72	419	0.13
20	(8.40)a)	30.484	4.69	(23.70)	50	8.48	30.52	4.68	23.71	420	0.21
30	8.47	30.521	4.64	23.72	75	8.43	30.51	4.69	23.72	419	0.32
50	8.48	30.515	4.68	23.71	100	8.30	30.55	4.61	23.77	414	0.42
75	8.43	30.514	4.69	23.72							
100	(8.30)b)	30.554	4.61	(23.77)							
9	CNAV OSHAWA; November 18, 1959; 1940 GCT; 48°42'N, 122°44'W; sounding, 45 fm; wind, missing; weather, overcast; sea, missing.										
0	8.20	30.368	5.06	23.64	0	8.20	30.37	5.06	23.64	426	0.00
2	8.32	30.357	5.14	23.61	10	8.29	30.37	4.95	23.63	427	0.04
6	8.31	30.351	5.05	23.61	20	8.31	30.38	4.93	23.63	427	0.09
10	8.29	30.373	4.95	23.63	30	8.29	30.39	5.00	23.64	426	0.13
20	8.31	30.378	4.93	23.63	50	8.33	30.43	4.95	23.67	423	0.22
30	8.29	30.391	5.00	23.64	75	8.35	30.48	4.85	23.71	420	0.32
50	8.33	30.428	4.95	23.67							
80	8.35	30.494	4.83	23.72							

a) Value interpolated graphically.
b) Value extrapolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CNAV OSHAWA; November 18, 1959; 2138 GCT; 48°46'N, 123°03'W; sounding, missing; wind, 330°, 5 kt; weather, overcast; sea, missing.											10
0	9.00	30.168	4.97	23.37	0	9.00	30.17	4.97	23.37	452	0.00
2	8.68	30.162	4.70	23.41	10	8.64	30.29	4.58	23.51	439	0.04
6	8.67	30.191	4.75	23.43	20	8.52	30.62	4.47	23.79	412	0.09
10	8.64	30.287	4.58	23.51	30	8.47	30.64	4.47	23.81	410	0.13
20	8.52	30.617	4.47	23.79	50	8.47	30.68	4.47	23.84	407	0.21
30	8.47	30.640	4.47	23.81	75	8.38	30.88	4.39	24.01	391	0.31
50	8.47	30.678	4.47	23.84	100	8.28	31.17	4.24	24.25	368	0.41
75	8.38	30.876	4.39	24.01	125	8.17	31.65	4.07	24.65	330	0.50
100	8.28	31.169	4.24	24.25	150	8.21	31.77	3.80	24.73	322	0.58
125	8.17	31.654	4.07	24.65	175	8.14	31.88	3.77	24.83	313	0.66
150	8.21	31.771	3.80	24.73							
180	8.13	31.900	3.77	24.85							
CNAV OSHAWA; November 18, 1959; 2225 GCT; 48°44'N, 122°58'W; sounding, 80 fm; wind, 320°, 2 kt; weather, fog; sea, missing.											11
0	8.90	29.505	5.21	22.86	0	8.90	29.50	5.21	22.86	501	0.00
2	8.73	29.895	4.84	23.19	10	8.68	30.01	4.86	23.29	460	0.05
6	8.71	29.972	4.80	23.26	20	8.63	30.14	4.75	23.40	449	0.09
10	8.68	30.012	4.86	23.29	30	8.58	30.24	4.85	23.48	442	0.14
20	8.63	30.142	4.75	23.40	50	8.53	30.50	4.63	23.70	421	0.23
30	8.58	30.239	4.85	23.48	75	8.49	30.72	4.73	23.87	404	0.33
50	8.53	30.504	4.63	23.70	100	8.41	30.68	4.46	23.85	406	0.43
75	8.49	30.716	4.73	23.87	125	8.40	30.79	4.11	23.94	398	0.53
100	8.41	30.676	4.46	23.85							
125	8.40	30.787	4.11	23.94							
CNAV OSHAWA; November 18, 1959; 2328 GCT; 48°41'N, 122°47'W; sounding, 55 fm; wind, 330°, 3 kt; weather, overcast; sea, missing.											12
0	8.70	30.488	4.88	23.66	0	8.70	30.49	4.88	23.66	424	0.00
2	8.50	30.474	4.75	23.68	10	8.49	30.48	4.74	23.69	422	0.04
6	8.50	30.477	4.69	23.68	20	8.47	30.50	4.58	23.70	421	0.08
10	8.49	30.483	4.74	23.69	30	8.48	30.52	4.70	23.72	419	0.13
20	8.47	30.497	4.58	23.70	50	8.49	30.50	4.58	23.70	421	0.21
30	8.48	30.521	4.70	23.72	75	8.46	30.55	4.70	23.74	417	0.32
50	8.49	30.496	4.58	23.70							
75	8.46	30.547	4.70	23.74							
95	8.45	30.579	4.63	23.77							
CNAV OSHAWA; November 19, 1959; 0003 GCT; 48°43'N, 122°44'W; sounding, missing; wind, 330°, 4 kt; weather, overcast; sea, missing.											13
0	8.30	30.394	5.17	23.64	0	8.30	30.39	5.17	23.64	426	0.00
2	8.34	30.403	5.04	23.65	10	8.30	30.41	5.06	23.66	424	0.04
6	8.33	30.410	5.00	23.65	20	8.35	30.43	4.89	23.66	424	0.09
10	8.30	30.414	5.06	23.66	30	8.36	30.48	4.85	23.70	421	0.13
20	8.35	30.428	4.89	23.66	50	8.39	30.49	4.86	23.70	421	0.21
30	8.36	30.476	4.85	23.70	75	8.42	30.57	4.67	23.76	415	0.32
50	8.39	30.487	4.86	23.70							
80	8.43	30.581	4.64	23.77							

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

14 CNAV OSHAWA; November 19, 1959; 0400 GCT; 48°16'N, 123°32'W; sounding, missing; wind, 040°, 2 kt; weather, partly cloudy; sea, missing.

0	8.20	31.460	5.14	24.49	0	8.20	31.46	5.14	24.49	345	0.00
2	7.98	31.638	4.64	24.66	10	7.91	31.82	4.52	24.82	314	0.03
6	7.97	31.681	4.52	24.70	20	7.83	32.04	4.13	25.00	297	0.06
8	7.94	31.752	4.66	24.76	30	7.80	32.12	4.07	25.07	290	0.09
16	7.84	(31.990)a)	4.18	(24.96)	50	7.69	32.17	3.80	25.12	285	0.15
25	7.82	32.086	4.08	25.04	75	7.67	32.70	3.47	25.54	245	0.22
41	7.76	32.191	4.03	25.13	100	7.68	33.28	3.21	26.00	202	0.28
61	7.62	32.151	3.55	25.12	125	7.55	33.48	3.00	26.16	186	0.32
82	7.69	32.937	3.44	25.72	150	7.45	33.49	2.83	26.19	184	0.37
102	7.68	33.320	3.19	26.02							
123	7.56	33.473	(3.02)b)	26.16							
143	7.48	33.489	2.88	26.18							
150	(7.45)c)	(33.494)c)	(2.83)c)	(26.19)							

15 CNAV OSHAWA; November 19, 1959; 0454 GCT; 48°14'N, 123°33'W; sounding, 77 fm; wind, missing; weather, partly cloudy; sea, missing.

0	8.40	31.611	4.87	24.58	0	8.40	31.61	4.87	24.58	337	0.00
2	8.10	31.569	4.76	24.59	10	7.86	32.34	3.83	25.23	275	0.03
6	8.06	(31.700)a)	4.35	(24.70)	20	7.79	32.36	3.52	25.25	273	0.06
10	7.86	32.340	3.83	25.23	30	7.70	32.46	3.72	25.34	264	0.08
20	7.79	32.356	3.52	25.25	50	7.68	32.90	3.40	25.69	231	0.14
30	7.70	32.456	3.72	25.34	75	7.66	31.11	3.37	24.29	364	0.21
50	7.68	32.900	3.40	25.69	100	7.57	33.54	2.87	26.22	181	0.28
75	7.66	31.110	3.37	24.29	125	7.55	33.67	2.70	26.31	172	0.32
100	7.57	33.545	2.87	26.22							
130	7.55	33.689	2.67	26.33							

16 CNAV OSHAWA; November 19, 1959; 0543 GCT; 48°11'N, 123°34'W; sounding, 50 fm; wind, missing; weather, partly cloudy; sea, missing.

0	8.00	32.146	4.26	25.06	0	8.00	32.15	4.26	25.06	291	0.00
2	7.78	32.214	3.53	25.14	10	7.80	32.56	3.38	25.41	258	0.03
6	7.83	32.472	3.56	25.34	20	7.78	32.77	3.55	25.58	242	0.05
10	7.80	32.557	3.38	25.41	30	7.75	32.86	3.40	25.65	235	0.08
20	7.78	32.772	3.55	25.58	50	7.69	33.23	3.32	25.95	206	0.12
29	7.75	32.835	3.42	25.63	75	7.71	33.18	3.24	25.91	210	0.17
49	7.69	33.234	3.32	25.95							
73	7.71	33.179	3.24	25.91							
75	(7.71)c)	(33.175)c)	(3.24)c)	(25.91)							

17 CNAV OSHAWA; November 19, 1959; 0920 GCT; 48°14'N, 123°33'W; sounding, 80 fm; wind, 040°, 5 kt; weather, intermittent moderate rain; sea, missing.

0	8.40	31.059	5.12	24.15	0	8.40	31.06	5.12	24.15	378	0.00
2	8.24	31.094	4.57	24.20	10	8.17	31.55	4.32	24.57	338	0.04
6	8.20	31.224	5.14	24.31	20	7.97	31.83	4.12	24.81	315	0.07
10	8.17	31.551	4.32	24.57	30	7.92	31.87	3.96	24.86	310	0.10
20	7.97	31.828	4.12	24.81	50	7.79	32.38	3.61	25.27	271	0.16
30	7.92	31.873	3.96	24.86	75	7.81	32.55	3.57	25.40	259	0.23
49	7.79	32.370	3.61	25.26	100	7.62	32.59	3.57	25.46	253	0.29
74	7.82	32.552	3.57	25.40	125	7.63	33.20	3.16	25.94	207	0.35
100	7.62	32.588	3.57	25.46							
130	7.63	33.308	3.09	26.02							

18 CNAV OSHAWA; November 19, 1959; 1123 GCT; 48°23'N, 123°59'W; sounding, missing; wind, 090°, 10 kt; weather, intermittent slight drizzle; sea, slight.

0	7.90	30.573	5.64	23.84	0	7.90	30.57	5.64	23.84	407	0.00
2	7.64	30.385	5.66	23.73	10	7.82	31.46	5.33	24.55	340	0.04
6	7.81	31.377	5.35	24.48	20	7.93	31.63	4.75	24.66	329	0.07
10	7.82	31.464	5.33	24.55	30	7.87	31.63	4.94	24.67	328	0.10
20	7.93	31.630	4.75	24.66	50	7.88	31.66	4.94	24.69	326	0.17
30	7.87	31.632	4.94	24.67							
50	7.88	31.657	4.94	24.69							

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

CNAV OSHAWA; November 19, 1959; 1219 GCT; 48°18'N, 124°03'W; sounding, 96 fm; wind, 140°, 10 kt; weather, intermittent slight drizzle; sea, slight. 19

0	8.10	31.669	4.92	24.67	0	8.10	31.67	4.92	24.67	328	0.00
2	7.98	31.678	4.73	24.69	10	7.91	31.79	4.46	24.79	317	0.03
6	7.92	31.828	4.57	24.82	20	7.90	32.01	4.21	24.97	300	0.06
10	7.91	31.789	4.46	24.79	30	7.86	32.10	4.20	25.04	293	0.09
19	7.91	32.004	4.21	24.96	50	7.83	32.32	4.17	25.22	276	0.15
29	7.86	32.085	4.20	25.03	75	7.72	32.86	3.82	25.65	235	0.22
48	7.84	32.264	4.20	25.17	100	7.69	33.18	3.53	25.91	210	0.27
71	7.72	32.800	3.85	25.61	125	7.62	33.56	3.05	26.22	181	0.32
95	(7.70)a)	33.098	3.65	(25.85)	150	7.47	33.81	2.74	26.44	160	0.36
119	7.64	33.469	3.12	26.15							
143	7.55	33.822	2.82	26.44							
162	7.35	33.802	2.61	26.45							

CNAV OSHAWA; November 19, 1959; 1318 GCT; 48°15'N, 124°05'W; sounding, 70 fm; wind, 140°, 10 kt; weather, cloudy; sea, slight. 20

0	8.20	32.099	4.93	24.99	0	8.20	32.10	4.93	24.99	298	0.00
2	7.80	32.098	4.75	25.05	10	7.78	32.27	4.74	25.19	279	0.03
6	7.80	32.099	4.82	25.05	20	7.82	32.27	4.41	25.18	280	0.06
10	7.78	32.269	4.74	25.19	30	7.78	32.35	4.27	25.25	273	0.08
20	7.82	32.269	4.41	25.18	50	7.77	32.53	4.36	25.39	260	0.14
30	7.78	32.353	4.27	25.25	75	7.70	32.74	4.30	25.57	242	0.20
50	7.77	32.526	4.36	25.39	100	7.68	32.85	4.21	25.65	235	0.26
75	7.70	32.743	4.30	25.57							
100	7.68	32.850	4.21	25.65							
115	7.60	33.105	4.00	25.87							

CNAV OSHAWA; November 19, 1959; 1713 GCT; 48°42'N, 125°06'W; sounding, 24 fm; wind, 140°, 5 kt; weather, cloudy; sea, slight. 21

0	8.00	30.940	6.06	24.11	0	8.00	30.94	6.06	24.11	382	0.00
2	7.77	30.897	6.04	24.11	10	7.81	31.36	5.57	24.47	347	0.04
6	7.77	30.944	5.99	24.15	20	7.85	31.62	5.35	24.67	328	0.07
10	7.81	31.364	5.57	24.47	30	7.82	31.91	5.11	24.90	306	0.10
19	7.85	31.592	5.39	24.65							
29	7.82	31.867	5.13	24.86							
39	7.80	32.292	4.92	25.20							
40	(7.80)b)	(32.330)b)	(4.89)b)	(25.23)							

CNAV OSHAWA; November 19, 1959; 1804 GCT; 48°36'N, 125°07'W; sounding, 50 fm; wind, 130°, 10 kt; weather, overcast; sea, slight. 22

0	8.50	32.257	6.29	25.07	0	8.50	32.26	6.29	25.07	290	0.00
2	8.36	32.247	6.28	25.08	10	8.30	32.25	6.23	25.10	287	0.03
6	8.35	32.251	6.23	25.09	20	8.24	32.26	6.15	25.11	286	0.06
10	8.30	32.251	6.23	25.10	30	8.28	32.39	6.03	25.21	277	0.09
20	8.24	32.259	6.15	25.11	50	7.85	32.93	4.85	25.69	231	0.14
30	8.28	32.387	6.03	25.21	75	7.57	33.52	3.37	26.19	184	0.19
49	7.86	32.902	4.92	25.67							
74	7.58	33.509	3.42	26.19							
89	7.44	33.606	2.73	26.28							
90	(7.43)b)	(33.612)b)	(2.69)b)	(26.29)							

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

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CS-59-3

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
23	CNAV OSHAWA; November 19, 1959; 1859 GCT; 48°31'N, 125°03'W; sounding, 54 fm; wind, 130°, 10 kt; weather, intermittent slight drizzle; sea, moderate.										
0	8.60	32.265	6.26	25.06	0	8.60	32.26	6.26	25.06	291	0.00
2	8.37	32.258	6.32	25.09	10	8.35	32.26	6.52	25.10	287	0.03
6	8.36	32.259	6.48	25.09	20	8.34	32.26	6.52	25.10	287	0.06
10	8.35	32.261	6.52	25.10	30	8.29	32.41	6.19	25.23	275	0.09
20	8.34	32.264	6.52	25.10	50	7.99	32.67	5.48	25.47	252	0.14
29	8.31	32.399	6.24	25.21	75	7.86	33.04	4.60	25.78	222	0.20
49	8.00	32.652	5.52	25.45							
74	7.87	33.018	4.66	25.76							
88	7.73	33.296	3.96	26.00							
90	(7.71)a)	(33.332)a)	(3.88)a)	(26.03)							
24	CNAV OSHAWA; November 19, 1959; 2015 GCT; 48°26'N, 124°57'W; sounding, 118 fm; wind, 160°, 25 kt; weather, moderate rain; sea, rough.										
0	9.30	32.233	6.36	24.93	0	9.30	32.23	6.36	24.93	303	0.00
2	9.06	32.089	6.60	24.85	10	9.00	32.28	6.60	25.01	296	0.03
6	9.03	32.269	6.56	25.00	20	8.96	32.33	6.26	25.06	291	0.06
10	9.00	32.276	6.60	25.01	30	8.76	32.33	6.43	25.09	288	0.09
20	8.96	32.334	6.26	25.06	50	8.07	32.65	5.62	25.44	255	0.14
30	8.76	32.327	6.43	25.09	75	7.95	33.44	4.26	26.08	194	0.20
50	8.07	32.650	5.62	25.44	100	7.70	33.49	3.66	26.15	187	0.25
75	7.95	33.438	4.26	26.08	125	7.65	33.53	3.46	26.19	184	0.30
100	(7.70)b)	33.488	3.66	(26.15)	150	7.64	33.56	3.34	26.22	181	0.34
125	7.65	33.530	3.46	26.19							
150	7.64	33.560	3.34	26.22							
25	CNAV OSHAWA; November 19, 1959; 2148 GCT; 48°24'N, 124°47'W; sounding, 95 fm; wind, 170°, 30 kt; weather, moderate rain; sea, rough.										
0	9.30	31.754	6.18	24.56	0	9.30	31.75	6.18	24.56	339	0.00
2	8.99	32.112	6.07	24.88	10	8.96	32.11	6.22	24.89	307	0.03
6	8.96	32.107	6.32	24.88	20	8.91	32.14	6.26	24.91	305	0.06
10	8.96	32.112	6.22	24.89	30	8.87	32.16	6.14	24.94	302	0.09
20	8.91	32.136	6.26	24.91	50	8.76	32.18	5.94	24.97	300	0.16
30	8.87	32.156	6.14	24.94	75	8.13	32.91	4.74	25.63	237	0.22
50	8.76	32.175	5.94	24.97	100	7.61	33.41	3.70	26.10	192	0.28
75	8.13	32.907	4.74	25.63	125	7.45	33.65	3.18	26.32	171	0.32
100	7.61	33.410	3.70	26.10	150	7.45	33.68	2.99	26.34	169	0.37
125	7.45	33.651	3.18	26.32	175	7.45	33.71	2.81	26.36	167	0.41
150	7.45	33.676	2.99	26.34							
175	7.45	33.709	2.81	26.36							
26	CNAV OSHAWA; November 24, 1959; 0010 GCT; 46°14'N, 124°10'W; sounding, missing; wind, 220°, 10 kt; weather, overcast; sea, slight.										
0	10.40	17.547	7.06	13.37	0	10.40	17.55	7.06	13.37	1417	0.00
2	10.38	24.034	6.80	18.39	10	11.26	31.34	6.36	23.91	400	0.09
6	11.27	31.109	6.51	23.73	20	11.26	31.43	6.50	23.98	394	0.13
10	11.26	31.338	6.36	23.91	30	11.12	31.71	6.48	24.22	371	0.17
20	11.26	31.434	6.50	23.98	50	10.74	31.80	6.37	24.35	359	0.24
30	11.12	31.714	6.48	24.22							
50	10.74	31.795	6.37	24.35							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δT	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

27

CNAV OSHAWA; November 24, 1959; 0321 GCT; 46°14'N, 124°40'W; sounding, missing; wind, 190°, 10 kt; weather, fog; sea, slight.

0	11.70	31.512	6.27	23.96	0	11.70	31.51	6.27	23.96	396	0.00
10	11.56	31.533	6.16	24.00	10	11.56	31.53	6.16	24.00	392	0.04
19	11.50	31.598	6.19	24.06	20	11.44	31.64	6.16	24.11	382	0.08
29	10.95	31.937	5.95	24.42	30	10.80	32.02	5.86	24.51	343	0.12
48	8.61	33.215	4.51	25.80	50	8.61	33.25	4.40	25.83	218	0.17
72	8.63	33.614	3.42	26.11	75	8.60	33.63	3.36	26.13	189	0.22
96	8.38	33.758	2.99	26.26	100	8.36	33.77	2.95	26.27	176	0.27
120	8.27	33.801	2.74	26.31	125	8.24	33.81	2.72	26.33	170	0.31
143	8.12	33.837	2.65	26.36	150	8.09	33.85	2.62	26.38	166	0.36
167	8.01	33.870	2.53	26.41	175	7.98	33.88	2.51	26.42	162	0.40
191	7.91	33.883	2.46	26.43	200	7.83	33.89	2.46	26.45	159	0.44
239	7.54	33.926	2.49	26.52	250	7.38	33.94	2.43	26.55	149	0.52
296	6.76	33.990	2.22	26.68	300	6.72	33.99	2.18	26.68	137	0.59
394	5.98	34.049	1.43	26.83	400	5.93	34.05	1.40	26.84	122	0.73
493	5.24	34.119	0.91	26.97	500	5.19	34.12	0.87	26.98	109	0.85
500	(5.19)a)	(34.123)a)	(0.87)a)	(26.98)							

28

CNAV OSHAWA; November 24, 1959; 0534 GCT; 46°11'N, 125°09'W; sounding, 800 fm; wind, 190°, 10 kt; weather, intermittent moderate rain; sea, slight.

0	12.20	31.995	6.19	24.24	0	12.20	32.00	6.19	24.24	369	0.00
10	12.08	31.989	6.31	24.26	10	12.08	31.99	6.31	24.26	367	0.04
20	12.07	31.988	6.32	24.26	20	12.07	31.99	6.32	24.26	367	0.07
30	12.00	31.993	6.29	24.28	30	12.00	31.99	6.29	24.28	365	0.11
50	8.85	32.814	5.45	25.45	50	8.85	32.81	5.45	25.45	254	0.17
75	8.36	33.236	4.51	25.86	75	8.36	33.24	4.51	25.86	215	0.23
100	8.05	33.562	3.81	26.16	100	8.05	33.56	3.81	26.16	186	0.28
125	7.83	33.818	3.15	26.39	125	7.83	33.82	3.15	26.39	164	0.33
150	7.58	33.884	2.98	26.48	150	7.58	33.88	2.98	26.48	156	0.37
175	7.33	33.929	2.65	26.55	175	7.33	33.93	2.65	26.55	149	0.41
200	7.17	33.960	2.41	26.60	200	7.17	33.96	2.41	26.60	145	0.45
250	6.75	33.999	2.13	26.69	250	6.75	34.00	2.13	26.69	136	0.52
300	6.28	34.033	1.68	26.77	300	6.28	34.03	1.68	26.77	128	0.59
401	5.63	34.077	1.18	26.89	400	5.64	34.08	1.18	26.89	117	0.72
501	5.35	34.122	0.91	26.96	500	5.35	34.12	0.91	26.96	110	0.84
602	4.87	34.190	0.84	27.07	600	4.88	34.19	0.84	27.07	100	0.95
802	4.08	34.330	0.39	27.27	700	4.46	34.26	0.60	27.17	91	1.05
1004	3.58	34.416	0.48	27.39	800	4.09	34.33	0.39	27.27	81	1.14
					1000	3.59	34.41	0.48	27.38	71	1.32

29

CNAV OSHAWA; November 24, 1959; 0942 GCT; 46°38'N, 124°45'W; sounding, 90 fm; wind, 220°, 12 kt; weather, cloudy; sea, slight.

0	11.30	31.711	6.54	24.19	0	11.30	31.71	6.54	24.19	374	0.00
10	11.17	31.704	6.47	24.21	10	11.17	31.70	6.47	24.21	372	0.04
20	10.97	31.837	6.36	24.34	20	10.97	31.84	6.36	24.34	360	0.07
30	9.43	32.595	5.41	25.19	30	9.43	32.60	5.41	25.19	279	0.11
50	8.52	33.010	4.79	25.66	50	8.52	33.01	4.79	25.66	234	0.16
75	8.63	33.539	3.85	26.05	75	8.63	33.54	3.85	26.05	197	0.21
100	8.41	33.744	3.54	26.25	100	8.41	33.74	3.54	26.25	178	0.26
125	8.19	33.802	3.23	26.33	125	8.19	33.80	3.23	26.33	170	0.30
150	7.91	33.872	2.81	26.42	150	7.91	33.87	2.81	26.42	162	0.35

30

CNAV OSHAWA; November 24, 1959; 1215 GCT; 47°07'N, 124°50'W; sounding, 60 fm; wind, 270°, 10 kt; weather, cloudy; sea, slight.

0	11.20	32.001	6.36	24.43	0	11.20	32.00	6.36	24.43	351	0.00
2	10.87	32.018	6.42	24.50	10	10.86	32.01	6.48	24.50	344	0.04
6	10.86	32.011	6.42	24.50	20	10.86	32.13	6.03	24.59	336	0.07
10	10.86	32.013	6.48	24.50	30	10.57	32.19	6.06	24.68	327	0.10
20	10.86	32.127	6.03	24.59	50	8.53	33.31	3.65	25.89	307	0.16
30	10.57	32.186	6.06	24.68	75	8.14	33.65	3.68	26.22	181	0.21
50	8.53	33.308	3.65	25.89	100	8.90	33.77	3.16	26.19	184	0.25
75	8.14	33.651	3.68	26.22							
100	8.90	33.770	3.16	26.19							

a) Value extrapolated by two-point logarithmic method.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
31	CNAV OSHAWA; November 24, 1959; 1550 GCT; 47°21'N, 125°22'W; sounding, 700 fm; wind, 190°, 12 kt; weather, cloudy; sea, slight.											
	0	11.60	32.378	6.40	24.65	0	11.60	32.38	6.40	24.65	330	0.00
	10	11.46	32.345	6.35	24.65	10	11.46	32.34	6.35	24.65	330	0.03
	20	11.41	32.348	6.13	24.66	20	11.41	32.35	6.13	24.66	329	0.07
	30	11.34	32.343	6.25	24.67	30	11.34	32.34	6.25	24.67	328	0.10
	50	10.97	32.340	6.17	24.73	50	10.97	32.34	6.17	24.73	322	0.16
	75	8.13	33.066	4.84	25.76	75	8.13	33.07	4.84	25.76	224	0.23
	100	8.02	33.443	3.66	26.07	100	8.02	33.44	3.66	26.07	195	0.29
	125	7.79	33.680	3.28	26.29	125	7.79	33.68	3.28	26.29	174	0.33
	150	7.55	33.825	3.15	26.44	150	7.55	33.82	3.15	26.44	160	0.38
	175	7.52	33.892	2.45	26.50	175	7.52	33.89	2.45	26.50	154	0.42
	200	7.18	33.948	2.52	26.59	200	7.18	33.95	2.52	26.59	146	0.46
	250	6.77	33.982	2.12	26.67	250	6.77	33.98	2.12	26.67	138	0.53
	300	6.30	34.000	2.00	26.75	300	6.30	34.00	2.00	26.75	130	0.60
	395	5.50	34.049	1.37	26.88	400	5.48	34.05	1.34	26.89	117	0.73
	492	5.18	34.111	0.92	26.97	500	5.14	34.12	0.88	26.98	109	0.85
	589	4.76	34.200	0.54	27.09	600	4.71	34.21	0.53	27.10	97	0.96
	784	4.06	34.302	0.38	27.25	700	4.34	34.26	0.45	27.19	89	1.06
	979	3.55	34.402	0.40	27.38	800	4.01	34.31	0.38	27.26	82	1.15
	1000	(3.50)a)	(34.412)a)	(0.40)a)	(27.39)	1000	3.50	34.41	0.40	27.39	70	1.32
32	CNAV OSHAWA; November 24, 1959; 1902 GCT; 47°56'N, 125°04'W; sounding, 65 fm; wind, 200°, 25 kt; weather, intermittent slight drizzle; sea, rough.											
	0	10.10	30.754	6.36	23.65	0	10.10	30.75	6.36	23.65	425	0.00
	2	9.88	30.682	6.48	23.63	10	9.88	30.79	6.37	23.71	420	0.04
	6	9.88	30.683	6.43	23.63	20	9.85	31.47	6.06	24.25	368	0.08
	9	9.88	30.701	6.42	23.64	30	10.75	32.08	6.32	24.57	338	0.12
	20	9.85	31.471	6.06	24.25	50	8.84	32.89	4.11	25.51	248	0.18
	30	10.75	32.085	6.32	24.57	75	8.17	33.48	3.42	26.07	195	0.23
	50	8.84	32.886	4.11	25.51	100	8.10	33.58	3.18	26.17	185	0.28
	75	8.17	33.475	3.42	26.07	125	8.11	33.59	2.84	26.17	185	0.33
	100	8.10	33.584	3.18	26.17							
	125	8.11	33.592	2.84	26.17							
33	CNAV OSHAWA; November 24, 1959; 2128 GCT; 48°07'N, 124°34'W; sounding, 70 fm; wind, 320°, 30 kt; weather, cloudy; sea, rough.											
	0	10.40	32.437	6.37	24.91	0	10.40	32.44	6.37	24.91	305	0.00
	2	10.48	32.418	6.37	24.88	10	10.46	32.42	6.36	24.89	307	0.03
	6	10.45	32.427	6.34	24.89	20	10.42	32.42	6.37	24.89	307	0.06
	8	10.47	32.426	6.36	24.89	30	10.26	32.45	6.24	24.94	302	0.09
	17	10.42	32.421	6.36	24.89	50	9.24	32.70	5.29	25.30	268	0.15
	27	10.43	32.428	6.38	24.90	75	7.95	33.50	3.55	26.12	190	0.21
	46	9.52	32.532	5.63	25.13	100	7.84	33.73	2.65	26.32	171	0.25
	73	7.95	33.473	3.64	26.10	125	7.50	33.84	2.25	26.46	158	0.30
	95	7.92	33.701	2.74	26.29							
	119	7.58	33.814	2.34	26.43							
	125	(7.50)a)	(33.839)a)	(2.25)a)	(26.46)							
34	CNAV OSHAWA; November 27, 1959; 0555 GCT; 48°25'N, 125°33'W; sounding, 70 fm; wind, 070°, 25 kt; weather, partly cloudy; sea, moderate.											
	0	9.20	32.444	6.16	25.11	0	9.20	32.44	6.16	25.11	286	0.00
	2	8.31	32.368	6.13	25.19	10	8.30	32.34	6.20	25.17	280	0.03
	6	8.27	32.344	6.34	25.17	20	8.27	32.35	6.34	25.18	280	0.06
	9	8.30	32.345	6.18	25.17	30	8.23	32.51	6.07	25.31	267	0.08
	19	8.27	32.347	6.34	25.18	50	7.79	33.29	4.09	25.98	204	0.13
	28	8.30	32.405	6.34	25.22	75	7.72	33.58	2.98	26.22	181	0.18
	46	7.80	33.220	4.35	25.93	100	7.56	33.62	2.89	26.28	175	0.23
	70	7.77	33.563	2.99	26.20							
	93	7.58	33.613	2.93	26.27							
	116	7.52	33.651	2.80	26.31							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
CNAV OSHAWA; November 27, 1959; 0739 GCT; 48°24'N, 126°14'W; sounding, 500 fm; wind, 130°, 15 kt; weather, clear; sea, slight.											35
0	10.20	32.458	6.68	24.96	0	10.20	32.46	6.68	24.96	300	0.00
10	10.28	32.344	6.71	24.86	10	10.28	32.34	6.71	24.86	310	0.03
20	10.24	32.371	6.61	24.88	20	10.24	32.37	6.61	24.88	308	0.06
30	10.25	32.366	6.60	24.88	30	10.25	32.37	6.60	24.88	308	0.09
50	10.22	32.339	6.62	24.86	50	10.22	32.34	6.62	24.86	310	0.16
74	7.66	32.963	5.82	25.75	75	7.67	32.98	5.76	25.76	320	0.22
99	7.86	33.386	4.31	26.05	100	7.86	33.40	4.28	26.06	196	0.28
124	7.76	33.622	3.66	26.25	125	7.75	33.63	3.64	26.25	178	0.32
149	7.60	33.760	3.18	26.38	150	7.59	33.76	3.16	26.39	164	0.37
174	7.30	33.878	2.74	26.52	175	7.29	33.88	2.73	26.52	152	0.41
199	7.07	33.935	2.60	26.59	200	7.06	33.94	2.60	26.59	146	0.45
248	6.74	33.952	2.44	26.65	250	6.72	33.95	2.42	26.66	139	0.52
298	6.23	34.007	1.99	26.76	300	6.22	34.01	1.98	26.76	129	0.59
400	5.57	34.064	1.27	26.89	400	5.57	34.06	1.27	26.89	117	0.72
500	4.91	34.149	0.96	27.03	500	4.91	34.15	0.96	27.03	104	0.84
600	4.49	34.204	0.48	27.12	600	4.49	34.20	0.48	27.12	95	0.94
CNAV OSHAWA; November 27, 1959; 1045 GCT; 48°33'N, 126°02'W; sounding, 67 fm; wind, 040°, 22 kt; weather, partly cloudy; sea, moderate.											36
0	8.10	32.564	6.34	25.37	0	8.10	32.56	6.34	25.37	262	0.00
2	8.27	32.528	6.23	25.32	10	8.19	32.52	6.36	25.32	266	0.03
6	8.20	32.509	6.34	25.31	20	8.19	32.52	6.34	25.32	266	0.05
10	8.19	32.515	6.36	25.32	30	8.20	32.54	6.32	25.34	264	0.08
20	8.19	32.516	6.34	25.32	50	7.84	33.17	3.92	25.88	213	0.13
30	8.20	32.540	6.32	25.34	75	7.51	33.58	2.96	26.25	178	0.18
50	7.84	33.166	3.92	25.88	100	7.40	33.76	2.25	26.40	164	0.22
75	7.51	33.584	2.96	26.25							
100	7.40	33.755	2.25	26.40							
CNAV OSHAWA; November 27, 1959; 1224 GCT; 48°43'N, 125°49'W; sounding, missing; wind, 110°, 40 kt; weather, partly cloudy; sea, rough.											37
0	8.90	32.208	6.56	24.97	0	8.90	32.21	6.56	24.97	300	0.00
2	9.20	32.166	6.47	24.89	10	9.14	32.18	6.50	24.91	305	0.03
6	9.15	32.162	6.50	24.90	20	9.09	32.22	6.40	24.95	301	0.06
10	9.14	32.181	6.50	24.91	30	8.85	32.30	6.45	25.05	292	0.09
20	9.09	32.218	6.40	24.95	50	8.58	32.74	5.14	25.44	255	0.15
30	8.85	32.300	6.45	25.05							
50	8.58	32.739	5.14	25.44							
CNAV OSHAWA; November 27, 1959; 1424 GCT; 48°54'N, 125°34'W; sounding, missing; wind, 110°, 35 kt; weather, clear; sea, very rough.											38
0	9.10	30.931	6.78	23.95	0	9.10	30.93	6.78	23.95	397	0.00
2	9.19	30.915	6.80	23.92	10	9.15	31.04	6.75	24.02	390	0.04
6	9.14	30.918	6.75	23.93	20	9.01	31.61	6.72	24.49	345	0.08
10	9.15	31.036	6.75	24.02	30	9.20	31.84	6.55	24.64	331	0.11
20	9.01	31.609	6.72	24.49	50	9.20	31.93	6.51	24.71	324	0.18
30	9.20	31.843	6.55	24.64	75	9.32	32.20	6.29	24.90	306	0.26
50	9.20	31.934	6.51	24.71							
75	9.32	32.199	6.29	24.90							
CNAV OSHAWA; November 27, 1959; 1605 GCT; 48°43'N, 125°50'W; sounding, 45 fm; wind, 120°, 35 kt; weather, partly cloudy; sea, very rough.											39
0	9.40	31.554	6.34	24.38	0	9.40	31.55	6.34	24.38	356	0.00
2	9.54	31.535	6.36	24.35	10	9.54	31.57	6.34	24.38	356	0.04
6	9.52	31.528	6.38	24.34	20	9.78	31.82	6.25	24.53	341	0.07
9	9.51	31.541	6.35	24.36	30	9.78	32.08	6.05	24.73	322	0.10
19	9.75	31.794	6.26	24.52	50	8.50	32.53	5.01	25.28	270	0.16
28	9.97	32.028	6.17	24.66	75	8.26	33.02	3.93	25.71	229	0.23
46	8.55	32.431	5.22	25.20							
69	8.31	32.919	4.16	25.62							
75	(8.26)a)	(33.023)a)	(3.93)a)	(25.71)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
40	CNAV OSHAWA; November 27, 1959; 1725 GCT; 48°34'N, 126°03'W; sounding, 65 fm; wind, 110°, 30 kt; weather, partly cloudy; sea, rough.										
0	8.50	32.394	6.52	25.18	0	8.50	32.39	6.52	25.18	280	0.00
2	8.49	32.418	6.61	25.20	10	8.56	32.42	6.61	25.19	279	0.03
6	8.58	32.425	6.56	25.19	20	8.21	32.47	6.44	25.28	270	0.06
10	8.56	32.422	6.61	25.19	30	8.10	32.52	6.45	25.34	264	0.08
20	8.21	32.472	6.44	25.28	50	8.00	32.69	5.84	25.48	251	0.14
30	8.10	32.524	6.45	25.34	75	7.49	33.53	3.17	26.22	181	0.19
50	8.00	32.687	5.84	25.48	100	7.36	33.71	2.74	26.38	166	0.23
74	7.50	33.524	3.19	26.21							
99	7.36	33.703	2.76	26.37							
100	(7.36)a)	(33.709)a)	(2.74)a)	(26.38)							
41	CNAV OSHAWA; November 27, 1959; 1903 GCT; 48°22'N, 126°13'W; sounding, 410 fm; wind, 110°, 20 kt; weather, partly cloudy; sea, rough.										
0	10.30	32.394	6.57	24.89	0	10.30	32.39	6.57	24.89	307	0.00
10	10.28	32.363	6.56	24.87	10	10.28	32.36	6.56	24.87	309	0.03
19	10.21	32.362	6.55	24.88	20	10.21	32.37	6.55	24.89	307	0.06
29	10.23	32.464	6.56	24.96	30	10.23	32.46	6.56	24.95	301	0.09
48	10.22	32.364	6.57	24.88	50	9.99	32.43	6.44	24.97	300	0.15
71	7.99	33.012	5.25	25.74	75	7.96	33.07	5.11	25.78	222	0.22
95	7.84	33.301	4.46	25.99	100	7.82	33.38	4.27	26.05	197	0.27
119	7.74	33.630	3.61	26.26	125	7.71	33.66	3.48	26.29	174	0.32
143	7.63	33.763	3.12	26.38	150	7.56	33.80	2.87	26.41	163	0.36
166	7.40	33.867	2.31	26.49	175	7.27	33.89	2.40	26.53	151	0.40
190	7.06	33.926	2.53	26.59	200	6.98	33.93	2.52	26.60	145	0.44
238	6.69	33.963	2.49	26.67	250	6.60	33.97	2.40	26.68	137	0.51
285	6.37	33.993	2.15	26.73	300	6.21	34.00	2.04	26.76	129	0.58
383	5.47	34.024	1.52	26.87	400	5.37	34.04	1.40	26.89	117	0.71
480	4.95	34.087	0.88	26.98	500	4.88	34.10	0.84	27.00	107	0.83
579	4.62	34.151	0.69	27.07	600	4.55	34.17	0.65	27.09	98	0.94
727	4.16	34.252	0.44	27.20	700	4.24	34.24	0.48	27.18	90	1.04
42	CNAV OSHAWA; November 28, 1959; 0031 GCT; 49°07'N, 126°55'W; sounding, 190 fm; wind, 130°, 27 kt; weather, overcast; sea, moderate.										
0	10.30	32.474	6.62	24.95	0	10.30	32.47	6.62	24.95	301	0.00
10	10.42	32.451	6.60	24.91	10	10.42	32.45	6.60	24.91	305	0.03
19	10.40	32.457	6.60	24.92	20	10.40	32.46	6.59	24.92	304	0.06
29	10.40	32.447	6.53	24.92	30	10.37	32.44	6.52	24.92	304	0.09
48	9.98	32.405	6.42	24.95	50	9.76	32.47	6.26	25.04	293	0.15
71	7.84	33.071	4.89	25.81	75	7.77	33.16	4.58	25.88	213	0.22
95	7.49	33.534	3.18	26.22	100	7.47	33.58	3.15	26.26	177	0.27
119	7.39	33.733	3.04	26.39	125	7.37	33.76	2.88	26.41	163	0.31
143	(7.30)b)	33.831	2.44	(26.48)	150	7.27	33.83	2.39	26.48	156	0.35
172	7.19	33.841	2.21	26.50	175	7.18	33.84	2.22	26.51	153	0.39
197	7.14	33.868	2.33	26.53	200	7.13	33.87	2.33	26.53	151	0.43
246	7.04	33.896	2.35	26.57	250	7.00	33.90	2.33	26.58	146	0.50
325	6.31	34.002	2.00	26.75	300	6.52	33.97	2.11	26.69	136	0.58
43	CNAV OSHAWA; November 28, 1959; 0632 GCT; 50°05'N, 127°58'W; sounding, 76 fm; wind, 110°, 32 kt; weather, intermittent moderate rain; sea, rough.										
0	8.60	31.892	6.27	24.77	0	8.60	31.89	6.27	24.77	319	0.00
2	8.50	31.980	6.51	24.85	10	8.45	31.94	6.41	24.83	313	0.03
6	8.48	31.963	6.44	24.84	20	8.41	31.96	6.44	24.85	311	0.06
10	8.45	31.935	6.41	24.83	30	8.47	31.99	6.40	24.87	309	0.10
19	8.40	31.955	6.45	24.85	50	8.51	32.09	6.36	24.94	302	0.16
29	8.47	31.983	6.40	24.86	75	8.12	32.37	5.14	25.22	276	0.23
49	8.53	32.075	6.42	24.92	100	8.06	32.72	4.46	25.50	249	0.30
73	8.12	32.343	5.20	25.19	125	7.87	33.15	3.72	25.87	214	0.36
97	8.08	32.658	4.56	25.45							
121	7.90	33.090	3.83	25.81							
125	(7.87)a)	(33.154)a)	(3.72)a)	(25.87)							

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

CNAV OSHAWA; November 28, 1959; 0724 GCT; 50°03'N, 128°02'W; sounding, 500 fm; wind, 260°, 10 kt; weather, intermittent moderate rain; sea, smooth. 44

0	9.50	32.330	6.59	24.97	0	9.50	32.33	6.59	24.97	300	0.00
10	9.52	32.333	6.59	24.97	10	9.52	32.33	6.59	24.97	300	0.03
20	9.50	32.339	6.62	24.98	20	9.50	32.34	6.62	24.98	299	0.06
30	9.51	32.386	6.61	25.02	30	9.51	32.39	6.61	25.02	295	0.09
50	8.15	(32.430)a)	5.58	(25.26)	50	8.15	32.43	5.58	25.26	272	0.15
75	8.08	32.443	5.02	25.28	75	8.08	32.44	5.02	25.28	270	0.22
100	7.70	33.092	5.05	25.84	100	7.70	33.09	5.05	25.84	217	0.28
125	7.51	33.585	3.60	26.26	125	7.51	33.58	3.60	26.26	177	0.33
150	7.28	33.775	2.68	26.44	150	7.28	33.78	2.68	26.44	160	0.37
175	7.25	33.804	2.60	26.46	175	7.25	33.80	2.60	26.46	158	0.41
200	7.17	33.858	2.45	26.52	200	7.17	33.86	2.45	26.52	152	0.45
250	6.84	33.941	2.26	26.63	250	6.84	33.94	2.26	26.63	142	0.53
300	6.64	33.960	2.23	26.67	300	6.64	33.96	2.23	26.67	138	0.60
390	5.93	34.037	1.94	26.82	400	5.86	34.04	1.87	26.83	123	0.74
488	5.35	34.082	1.37	26.93	500	5.25	34.09	1.28	26.95	111	0.86
586	4.63	34.156	0.73	27.07	600	4.57	34.17	0.71	27.08	99	0.97
781	3.95	34.277	0.48	27.24	700	4.21	34.23	0.57	27.17	91	1.07
879	3.85	34.290	0.43	27.26	800	3.93	34.28	0.47	27.24	84	1.17

CNAV OSHAWA; November 28, 1959; 0943 GCT; 49°55'N, 128°14'W; sounding, 1120 fm; wind, 290°, 15 kt; weather, intermittent slight drizzle; sea, slight. 45

0	9.70	32.383	6.62	24.98	0	9.70	32.38	6.62	24.98	299	0.00
10	9.68	32.369	6.43	24.97	10	9.68	32.37	6.43	24.97	300	0.03
19	9.61	32.364	6.84	24.98	20	9.64	32.36	6.82	24.98	299	0.06
29	9.89	32.365	6.62	24.94	30	9.86	32.37	6.62	24.95	301	0.09
48	9.40	32.429	6.63	25.07	50	9.29	32.49	6.53	25.13	284	0.15
72	(8.30)a)	33.011	5.60	(25.69)	75	8.17	33.05	5.50	25.74	226	0.21
97	7.36	33.302	4.89	26.05	100	7.32	33.34	4.89	26.09	193	0.27
121	7.04	33.617	4.89	26.35	125	7.00	33.64	4.84	26.37	166	0.31
145	6.84	33.745	4.60	26.47	150	6.80	33.76	4.56	26.49	155	0.35
169	6.67	33.816	4.42	26.55	175	6.61	33.83	4.35	26.57	148	0.39
193	6.43	33.858	4.11	26.62	200	6.37	33.87	3.98	26.64	141	0.43
241	6.05	33.935	(3.26)b)	26.73	250	6.00	33.94	3.11	26.74	131	0.50
290	5.78	33.961	2.54	26.78	300	5.73	33.97	2.41	26.80	126	0.57
396	5.29	34.053	1.29	26.91	400	5.27	34.06	1.27	26.92	114	0.69
496	4.95	34.114	0.75	27.00	500	4.93	34.12	0.76	27.01	106	0.81
596	4.48	34.182	0.92	27.11	600	4.46	34.18	0.91	27.11	96	0.92
796	3.78	34.293	0.54	27.27	700	4.09	34.24	0.71	27.20	88	1.02
996	3.35	34.383	0.43	27.38	800	3.77	34.30	0.54	27.27	81	1.11
1000	(3.34)c)	(34.385)c)	(0.43)c)	(27.38)	1000	3.34	34.38	0.43	27.38	71	1.28

a) Value interpolated graphically.
b) Value interpolated by two-point logarithmic method.
c) Value extrapolated by two-point logarithmic method.

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
46	CNAV OSHAWA; November 28, 1959; 1314 GCT; 49°47'N, 128°25'W; sounding, missing; wind, 270°, 20 kt; weather, partly cloudy; sea, rough.										
0	10.30	32.552	6.62	25.01	0	10.30	32.55	6.62	25.01	296	0.00
10	10.46	32.506	6.57	24.95	10	10.46	32.51	6.57	24.95	301	0.03
20	10.41	32.505	6.56	24.96	20	10.41	32.50	6.56	24.96	300	0.06
30	10.33	32.519	6.55	24.98	30	10.33	32.52	6.55	24.98	299	0.09
50	10.26	32.535	6.55	25.01	50	10.26	32.54	6.55	25.01	296	0.15
75	7.89	32.859	6.38	25.63	75	7.89	32.86	6.38	25.63	237	0.22
100	7.37	33.018	6.22	25.83	100	7.37	33.02	6.22	25.83	218	0.28
125	7.00	33.245	5.63	26.06	125	7.00	33.24	5.63	26.06	196	0.33
150	6.99	33.535	3.51	26.29	150	6.99	33.54	3.51	26.29	174	0.38
175	6.93	33.739	4.20	26.46	175	6.93	33.74	4.20	26.46	158	0.42
200	6.40	33.795	4.82	26.57	200	6.40	33.80	4.82	26.57	148	0.46
250	5.90	33.865	4.28	26.69	250	5.90	33.86	4.28	26.69	136	0.53
300	5.46	33.896	3.47	26.77	300	5.46	33.90	3.47	26.77	128	0.60
400	4.76	33.977	1.84	26.91	400	4.76	33.98	1.84	26.91	115	0.72
500	4.88	34.138	0.85	27.03	500	4.88	34.14	0.85	27.03	104	0.84
600	4.20	34.131	0.77	27.10	600	4.20	34.13	0.77	27.10	97	0.95
800	3.73	34.272	0.43	27.26	700	3.95	34.21	0.58	27.18	90	1.05
1000	3.33	34.365	0.38	27.37	800	3.73	34.27	0.43	27.26	82	1.14
					1000	3.33	34.36	0.38	27.37	72	1.31
47	CNAV OSHAWA; November 28, 1959; 1826 GCT; 50°32'N, 129°45'W; sounding, 1150 fm; wind, 190°, 25 kt; weather, cloudy; sea, moderate.										
0	9.00	32.270	6.53	25.01	0	9.00	32.27	6.53	25.01	296	0.00
10	9.07	32.255	6.53	24.98	10	9.07	32.26	6.53	24.98	299	0.03
20	9.03	32.253	6.61	24.99	20	9.03	32.25	6.61	24.99	298	0.06
29	9.07	32.258	6.71	24.98	30	9.07	32.27	6.70	24.99	298	0.09
49	(9.00)a)	32.383	6.60	(25.09)	50	8.94	32.42	6.52	25.13	284	0.15
73	7.77	33.078	5.00	25.82	75	7.73	33.11	4.93	25.85	216	0.21
98	7.35	33.441	4.31	26.17	100	7.32	33.46	4.39	26.18	184	0.26
122	7.01	33.600	5.12	26.34	125	7.02	33.63	4.88	26.36	167	0.31
147	7.12	33.797	3.33	26.48	150	7.10	33.81	3.29	26.49	155	0.35
171	6.98	33.880	3.04	26.56	175	6.93	33.89	2.95	26.58	146	0.39
189	6.77	33.924	2.64	26.62	200	6.64	33.93	2.60	26.65	140	0.42
236	6.27	33.954	2.48	26.71	250	6.11	33.97	2.22	26.75	130	0.49
285	5.76	34.013	1.62	26.82	300	5.68	34.02	1.56	26.84	122	0.56
383	5.30	34.070	1.21	26.93	400	5.22	34.08	1.16	26.94	112	0.68
483	4.86	34.108	0.99	27.01	500	4.74	34.12	0.93	27.03	104	0.80
583	4.19	34.165	0.68	27.12	600	4.15	34.18	0.65	27.14	93	0.90
774	3.82	34.287	0.40	27.26	700	3.95	34.24	0.50	27.21	87	1.00
965	3.47	34.383	0.39	27.37	800	3.77	34.30	0.40	27.28	80	1.09
1000	(3.41)b)	(34.399)b)	(0.39)b)	(27.39)	1000	3.41	34.40	0.39	27.39	70	1.26
48	CNAV OSHAWA; November 28, 1959; 2328 GCT; 50°56'N, 130°57'W; sounding, 1350 fm; wind, 160°, 47 kt; weather, intermittent slight drizzle; sea, very rough.										
0	9.40	32.298	6.59	24.96	0	9.40	32.30	6.59	24.96	300	0.00
10	9.29	32.296	6.57	24.98	10	9.29	32.30	6.57	24.98	299	0.03
20	9.27	32.297	6.53	24.98	20	9.27	32.30	6.53	24.98	299	0.06
30	9.14	32.316	6.04	25.02	30	9.14	32.32	6.04	25.02	295	0.09
50	8.03	32.964	4.82	25.69	50	8.03	32.96	4.82	25.69	231	0.14
75	7.22	33.398	4.75	26.15	75	7.22	33.40	4.75	26.15	187	0.20
100	6.86	33.566	4.84	26.33	100	6.86	33.57	4.84	26.33	170	0.24
125	6.95	33.794	3.86	26.50	125	6.95	33.79	3.86	26.50	154	0.28
150	6.50	33.850	4.10	26.60	150	6.50	33.85	4.10	26.60	145	0.32
175	6.25	33.888	3.62	26.66	175	6.25	33.89	3.62	26.66	139	0.36
200	5.95	33.899	3.40	26.71	200	5.95	33.90	3.40	26.71	134	0.39
250	5.70	33.902	3.16	26.74	250	5.70	33.90	3.16	26.74	131	0.46
300	5.22	33.942	2.52	26.83	300	5.22	33.94	2.52	26.83	123	0.53

a) Value interpolated graphically.

b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
CNAV OSHAWA; December 2, 1959; 1807 GCT; 53°18'N, 132°50'W; sounding, 110 fm; wind, 220°, 20 kt; weather, partly cloudy; sea, slight.											49
0	8.90	32.265	6.48	25.02	0	8.90	32.26	6.48	25.02	295	0.00
2	9.18	32.260	6.64	24.97	10	9.17	32.26	6.60	24.97	300	0.03
6	9.15	32.259	6.71	24.97	20	9.15	32.26	6.61	24.97	300	0.06
10	9.17	32.255	6.60	24.97	30	9.25	32.27	6.61	24.97	300	0.09
20	9.15	32.257	6.61	24.97	50	9.23	32.28	6.56	24.98	299	0.15
30	9.25	32.269	6.61	24.97	75	9.24	32.35	6.51	25.03	294	0.23
50	9.23	32.279	6.56	24.98	100	9.20	32.48	6.17	25.13	284	0.30
75	9.24	32.354	6.51	25.03	125	7.46	33.12	4.54	25.89	212	0.36
100	(9.20)a)	32.475	6.17	(25.13)	150	6.74	33.49	4.02	26.29	174	0.41
125	7.46	33.115	4.54	25.89	175	6.47	33.64	3.62	26.44	160	0.45
150	6.74	33.490	4.02	26.29	200	6.29	33.75	3.44	26.55	149	0.49
175	6.47	33.640	3.62	26.44							
200	6.29	33.746	3.44	26.55							
CNAV OSHAWA; December 2, 1959; 1932 GCT; 53°15'N, 133°02'W; sounding, 250 fm; wind, 220°, 20 kt; weather, cloudy; sea, slight.											50
0	9.40	32.362	6.63	25.01	0	9.40	32.36	6.63	25.01	296	0.00
9	9.77	32.328	6.32	24.93	10	9.77	32.33	6.33	24.93	303	0.03
18	9.74	32.334	6.43	24.94	20	9.74	32.34	6.44	24.94	302	0.06
27	9.74	32.351	6.47	24.95	30	9.65	32.35	6.47	24.97	300	0.09
45	9.26	32.365	6.46	25.04	50	9.10	32.40	6.25	25.09	288	0.15
68	8.60	32.488	5.61	25.24	75	8.29	32.63	5.52	25.39	260	0.22
91	7.66	32.902	5.33	25.70	100	7.41	33.04	5.00	25.85	216	0.28
113	7.08	33.231	4.55	26.04	125	6.93	33.35	4.37	26.15	187	0.33
136	6.81	33.449	4.22	26.25	150	6.72	33.52	3.95	26.31	172	0.38
159	6.67	33.555	3.80	26.35	175	6.54	33.62	3.68	26.42	162	0.42
181	6.50	33.646	3.65	26.44	200	6.31	33.72	3.46	26.53	151	0.46
226	6.08	33.820	3.21	26.63	250	5.96	33.86	2.98	26.68	137	0.53
273	5.85	33.891	2.77	26.72	300	5.67	33.93	2.54	26.77	128	0.60
365	5.28	34.000	2.07	26.87							
CNAV OSHAWA; December 2, 1959; 2120 GCT; 53°07'N, 133°13'W; sounding, 1250 fm; wind, 200°, 20 kt; weather, cloudy; sea, slight.											51
0	8.90	32.393	6.36	25.12	0	8.90	32.39	6.36	25.12	285	0.00
14	9.10	32.350	6.59	25.05	10	9.06	32.36	6.54	25.07	290	0.03
24	9.09	32.344	6.65	25.05	20	9.09	32.35	6.63	25.05	292	0.06
44	9.08	32.340	6.53	25.05	30	9.09	32.34	6.61	25.05	292	0.09
68	8.63	32.386	6.16	25.15	50	8.95	32.35	6.43	25.08	289	0.15
92	7.08	33.308	4.84	26.10	75	8.13	32.68	5.73	25.46	253	0.22
116	6.69	33.582	4.46	26.37	100	6.94	33.41	4.70	26.19	184	0.27
140	6.47	33.749	4.08	26.53	125	6.60	33.65	4.31	26.43	161	0.31
164	6.34	33.799	3.60	26.58	150	6.41	33.77	3.86	26.55	149	0.35
189	6.17	33.871	3.64	26.66	175	6.26	33.83	3.62	26.62	143	0.39
213	5.98	33.889	3.37	26.70	200	6.08	33.88	3.52	26.68	137	0.43
237	5.68	33.944	2.71	26.78	250	5.60	33.94	2.60	26.79	127	0.50
285	5.42	33.946	2.32	26.81	300	5.35	33.96	2.17	26.83	123	0.56
386	4.98	34.026	1.47	26.93	400	4.94	34.04	1.38	26.94	112	0.68
483	4.73	34.105	0.92	27.02	500	4.65	34.12	0.87	27.04	103	0.80
580	4.32	34.158	0.71	27.11	600	4.26	34.17	0.68	27.12	95	0.90
772	3.84	34.283	0.48	27.25	700	4.00	34.24	0.56	27.20	88	1.00
966	3.36	34.356	0.44	27.36	800	3.76	34.30	0.47	27.27	81	1.09
1000	(3.29)b)	(34.367)b)	(0.43)b)	(27.38)	1000	3.29	34.37	0.43	27.38	71	1.26

a) Value interpolated graphically.
b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
52	CNAV OSHAWA; December 3, 1959; 0345 GCT; 54°00'N, 134°00'W; sounding, 600 fm; wind, 210°, 30 kt; weather, squalls; sea, rough.										
0	9.10	32.314	6.53	25.02	0	9.10	32.31	6.53	25.02	295	0.00
10	9.32	32.354	6.66	25.02	10	9.32	32.35	6.66	25.02	295	0.03
19	9.27	32.358	6.60	25.03	20	9.27	32.36	6.60	25.03	294	0.06
29	9.29	32.356	6.57	25.03	30	9.29	32.36	6.57	25.03	294	0.09
39	9.27	32.356	6.59	25.03	50	8.74	32.56	5.53	25.27	271	0.15
48	8.87	32.527	5.62	25.23	75	7.43	32.91	4.73	25.74	226	0.21
73	7.47	32.882	4.73	25.71	100	7.03	33.24	4.65	26.05	197	0.26
97	7.06	33.207	4.73	26.02	125	6.77	33.45	4.08	26.25	178	0.31
121	6.82	(33.410)a)	4.13	(26.21)	150	6.51	33.68	3.79	26.46	158	0.35
145	6.56	33.652	3.84	26.44	175	6.27	33.78	3.49	26.58	146	0.39
169	6.34	33.762	3.60	26.55	200	6.04	33.85	3.15	26.66	139	0.43
193	6.07	33.848	3.19	26.66	250	5.89	33.89	2.90	26.71	134	0.50
290	5.78	33.911	2.73	26.74	300	5.71	33.92	2.26	26.76	129	0.57
337	5.49	33.948	0.65	26.81	400	5.29	33.99	0.92	26.86	120	0.70
435	5.19	34.008	1.05	26.89	500	4.83	34.05	1.51	26.96	110	0.82
535	4.66	34.069	1.74	27.00	600	4.43	34.12	1.94	27.06	101	0.93
732	4.02	34.207	2.30	27.18	700	4.11	34.19	2.22	27.15	92	1.03
53	CNAV OSHAWA; December 3, 1959; 0555 GCT; 54°03'N, 133°27'W; sounding, 90 fm; wind, 220°, 30 kt; weather, squalls; sea, moderate.										
0	9.00	32.345	6.65	25.06	0	9.00	32.34	6.65	25.06	291	0.00
2	9.29	32.318	6.63	25.00	10	9.26	32.32	6.65	25.01	296	0.03
6	9.25	32.325	6.71	25.01	20	9.25	32.32	6.65	25.00	297	0.06
10	9.26	32.323	6.65	25.01	30	9.26	32.32	6.68	25.00	297	0.09
19	9.25	32.319	6.65	25.00	50	9.25	32.32	6.69	25.01	296	0.15
29	9.26	32.318	6.68	25.00	75	9.28	32.35	6.66	25.02	295	0.22
49	9.25	32.321	6.69	25.01	100	9.23	32.34	6.61	25.02	295	0.30
73	9.28	32.349	6.66	25.02	125	8.93	32.47	6.19	25.17	280	0.37
97	9.26	32.325	6.65	25.01	150	8.20	32.80	5.32	25.54	245	0.44
122	9.03	32.423	6.31	25.12							
146	8.31	32.754	5.45	25.49							
150	(8.20)b)	(32.804)b)	(5.32)b)	(25.54)							
54	CNAV OSHAWA; December 3, 1959; 0825 GCT; 54°18'N, 133°00'W; sounding, missing; wind, 190°, 15 kt; weather, cloudy; sea, slight.										
0	7.50	31.271	5.78	24.44	0	7.50	31.27	5.78	24.44	350	0.00
9	7.75	31.445	5.72	24.54	10	7.75	31.45	5.71	24.55	340	0.04
19	7.78	31.505	5.67	24.59	20	7.80	31.52	5.70	24.60	335	0.07
28	7.94	31.618	5.90	24.65	30	7.96	31.66	5.86	24.68	327	0.10
47	8.13	31.914	5.54	24.86	50	8.10	31.98	5.52	24.91	305	0.17
71	7.94	32.334	5.40	25.21	75	7.77	32.46	5.04	25.34	264	0.24
94	7.05	32.978	3.56	25.84	100	6.95	33.06	3.44	25.92	209	0.30
118	6.69	33.299	3.12	26.14	125	6.58	33.36	2.98	26.21	182	0.35
142	6.35	33.511	2.65	26.35	150	6.31	33.53	2.71	26.37	166	0.39
165	6.24	33.560	2.82	26.41	175	6.21	33.58	2.83	26.43	161	0.43
189	6.16	33.614	2.84	26.46	200	6.10	33.64	2.79	26.49	155	0.47
238	5.90	33.730	2.60	26.58	250	5.87	33.75	2.56	26.60	145	0.55
287	5.77	33.793	2.49	26.65	300	5.77	33.80	2.49	26.65	140	0.62
387	5.74	33.824	2.45	26.68	400	5.74	33.83	2.45	26.68	137	0.77
400	(5.74)b)	(33.827)b)	(2.45)b)	(26.68)							

a) Value interpolated graphically.

b) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

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CNAV OSHAWA; December 3, 1959; 0958 GCT; 54°25'N, 132°58'W; sounding, 110 fm; wind, 180°, 20 kt; weather, cloudy; sea, moderate.

0	7.90	31.742	6.59	24.76	0	7.90	31.74	6.59	24.76	320	0.00
2	7.98	31.715	6.55	24.72	10	7.94	31.72	6.55	24.73	322	0.03
6	7.93	31.716	6.54	24.73	20	7.95	31.72	6.51	24.73	322	0.06
10	7.94	31.717	6.55	24.73	30	8.01	31.80	6.45	24.78	318	0.10
19	7.94	31.714	6.51	24.73	50	8.08	31.94	6.20	24.89	307	0.16
29	8.00	31.786	6.46	24.78	75	8.02	32.14	6.07	25.05	292	0.24
48	8.08	31.925	6.22	24.87	100	7.90	32.25	5.68	25.15	282	0.31
73	8.03	32.141	6.09	25.05	125	7.69	32.66	4.94	25.51	248	0.38
97	7.93	32.183	5.80	25.10	150	7.51	32.71	4.95	25.57	242	0.44
121	7.72	32.655	4.92	25.50	175	7.43	32.77	4.61	25.63	237	0.50
145	7.53	32.698	5.03	25.56							
169	7.45	32.758	4.69	25.62							
175	(7.43)a)	(32.772)a)	(4.61)a)	(25.63)							

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CNAV OSHAWA; December 3, 1959; 1135 GCT; 54°32'N, 132°59'W; sounding, 343 fm; wind, 300°, 50 kt; weather, overcast; sea, rough.

0	7.90	31.817	6.62	24.81	0	7.90	31.82	6.62	24.81	315	0.00
10	8.11	31.803	6.31	24.77	10	8.11	31.80	6.31	24.77	319	0.03
19	8.09	31.807	6.31	24.78	20	8.09	31.81	6.31	24.78	318	0.06
29	8.10	31.812	6.27	24.78	30	8.10	31.82	6.27	24.78	318	0.10
48	8.12	31.853	6.19	24.81	50	8.15	31.88	6.17	24.83	313	0.16
73	8.40	32.158	5.99	25.01	75	8.39	32.18	5.91	25.02	295	0.24
97	8.27	32.341	5.20	25.17	100	8.23	32.38	5.20	25.20	278	0.31
121	7.96	32.591	5.22	25.41	125	7.85	32.65	5.04	25.48	251	0.38
145	7.37	32.946	4.21	25.77	150	7.28	33.00	4.09	25.83	218	0.44
169	6.94	33.205	3.66	26.04	175	6.92	33.22	3.55	26.05	197	0.49
193	6.88	33.257	3.21	26.09	200	6.78	33.32	3.21	26.14	188	0.54
242	6.23	33.626	3.18	26.46	250	6.17	33.65	3.10	26.49	155	0.62
314	5.72	33.830	2.51	26.69	300	5.81	33.79	2.63	26.65	140	0.70

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CNAV OSHAWA; December 3, 1959; 1623 GCT; 54°37'N, 132°39'W; sounding, 68 fm; wind, 310°, 45 kt; weather, cloudy; sea, confused.

0	7.40	31.117	6.65	24.34	0	7.40	31.12	6.65	24.34	360	0.00
2	7.46	30.942	6.66	24.19	10	7.45	31.07	6.65	24.29	364	0.04
6	7.42	30.917	6.65	24.18	20	7.46	31.08	6.65	24.30	363	0.07
10	7.45	31.069	6.65	24.29	30	7.52	31.44	6.18	24.57	338	0.11
20	7.46	31.084	6.65	24.30	50	7.33	32.04	5.32	25.07	290	0.17
30	7.52	31.440	6.18	24.57	75	7.01	32.67	4.33	25.61	239	0.24
49	7.35	32.011	5.36	25.04	100	6.79	32.91	3.82	25.83	218	0.30
74	7.02	32.658	4.36	25.60							
98	6.81	32.895	3.85	25.81							
100	(6.79)a)	(32.912)a)	(3.82)a)	(25.83)							

58

CNAV OSHAWA; December 3, 1959; 1924 GCT; 54°42'N, 131°54'W; sounding, 200 fm; wind, 290°, 15 kt; weather, partly cloudy; sea, slight.

0	7.60	31.172	6.65	24.35	0	7.60	31.17	6.65	24.35	359	0.00
10	7.60	31.370	6.60	24.51	10	7.60	31.37	6.60	24.51	343	0.04
20	7.82	31.652	6.61	24.70	20	7.82	31.65	6.61	24.70	325	0.07
30	7.94	31.803	6.52	24.80	30	7.94	31.80	6.52	24.80	316	0.10
50	7.90	31.827	6.50	24.82	50	7.90	31.83	6.50	24.82	314	0.16
75	7.92	31.827	6.45	24.82	75	7.92	31.83	6.45	24.82	314	0.24
100	7.83	31.879	6.35	24.87	100	7.83	31.88	6.35	24.87	309	0.32
125	7.88	32.025	6.03	24.98	125	7.88	32.02	6.03	24.98	299	0.40
150	7.34	32.509	4.54	25.44	150	7.34	32.51	4.54	25.44	255	0.47
175	7.20	32.643	4.35	25.56	175	7.20	32.64	4.35	25.56	243	0.53
200	6.99	32.843	3.73	25.74	200	6.99	32.84	3.73	25.74	226	0.59
250	6.41	33.278	2.84	26.16	250	6.41	33.28	2.84	26.16	186	0.70
300	5.80	33.653	2.42	26.54	300	5.80	33.65	2.42	26.54	150	0.78

a) Value extrapolated by two-point logarithmic method.

POG

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
59	CNAV OSHAWA; December 3, 1959; 2058 GCT; 54°43'N, 131°35'W; sounding, 130 fm; wind, 300°, 10 kt; weather, partly cloudy; sea, slight.										
0	8.50	31.884	6.69	24.78	0	8.50	31.88	6.69	24.78	318	0.00
10	8.09	31.858	6.68	24.82	10	8.09	31.86	6.68	24.82	314	0.03
20	8.03	31.849	6.76	24.82	20	8.03	31.85	6.76	24.82	314	0.06
30	8.07	31.850	6.70	24.82	30	8.07	31.85	6.70	24.82	314	0.10
49	8.12	31.882	6.65	24.83	50	8.11	31.89	6.65	24.84	312	0.16
74	7.92	31.978	6.56	24.94	75	7.92	31.99	6.55	24.94	302	0.24
98	7.91	32.139	6.43	25.07	100	7.86	32.17	6.29	25.10	287	0.31
123	7.39	32.531	4.88	25.45	125	7.37	32.55	4.85	25.46	253	0.38
148	7.15	32.721	4.48	25.63	150	7.14	32.72	4.47	25.63	237	0.44
172	7.06	32.766	4.36	25.68	175	7.00	32.81	4.22	25.72	228	0.50
197	6.61	33.133	3.27	26.02	200	6.57	33.16	3.28	26.05	197	0.55
221	6.30	33.331	3.36	26.22							
60	CNAV OSHAWA; December 3, 1959; 2219 GCT; 54°46'N, 131°18'W; sounding, 100 fm; wind, 320°, 18 kt; weather, partly cloudy; sea, slight.										
0	7.50	31.065	6.81	24.28	0	7.50	31.06	6.81	24.28	365	0.00
2	7.59	31.041	6.81	24.25	10	7.82	31.38	6.72	24.49	345	0.04
6	7.69	31.055	6.84	24.25	20	7.87	31.49	6.53	24.56	339	0.07
10	7.82	31.382	6.72	24.49	30	7.92	31.57	6.35	24.62	333	0.10
20	7.87	31.491	6.53	24.56	50	7.92	31.63	6.57	24.67	328	0.17
30	7.92	31.570	6.35	24.62	75	7.93	31.66	6.63	24.69	326	0.25
50	7.92	31.631	6.57	24.67	100	7.80	31.73	6.55	24.76	320	0.34
75	7.93	31.662	6.63	24.69	125	7.71	32.07	5.47	25.04	293	0.41
100	(7.80)a)	31.734	6.55	(24.76)	150	7.41	32.43	4.68	25.37	262	0.48
125	7.71	32.073	5.47	25.04	175	7.10	32.70	4.01	25.62	238	0.55
150	7.41	32.434	4.68	25.37							
175	7.10	32.699	4.01	25.62							
61	CNAV OSHAWA; December 3, 1959; 2340 GCT; 54°48'N, 131°00'W; sounding, 62 fm; wind, 290°, 6 kt; weather, cloudy; sea, slight.										
0	7.50	30.884	6.85	24.14	0	7.50	30.88	6.85	24.14	379	0.00
2	7.58	30.844	6.78	24.10	10	7.74	31.01	6.62	24.20	373	0.04
6	7.59	30.851	6.70	24.10	20	8.09	31.40	6.46	24.46	348	0.07
10	7.74	31.006	6.62	24.20	30	8.13	31.46	6.38	24.51	343	0.11
20	8.09	31.396	6.46	24.46	50	8.21	31.75	6.10	24.72	323	0.18
30	8.13	31.465	6.38	24.51	75	8.16	31.88	5.80	24.83	313	0.26
50	8.21	31.753	6.10	24.72	100	8.10	32.14	5.08	25.04	293	0.33
75	8.16	31.883	5.80	24.83							
100	(8.10)b)	32.142	5.08	(25.04)							
62	CNAV OSHAWA; December 4, 1959; 0047 GCT; 54°44'N, 130°52'W; sounding, missing; wind, 220°, 5 kt; weather, cloudy; sea, slight.										
0	7.80	30.973	6.66	24.17	0	7.80	30.97	6.66	24.17	376	0.00
2	7.67	30.879	6.68	24.11	10	7.82	31.04	6.65	24.22	371	0.04
6	7.80	31.011	6.56	24.20	20	8.04	31.31	6.53	24.40	354	0.07
10	7.82	31.042	6.65	24.22	30	8.12	31.48	6.52	24.51	343	0.11
20	8.04	31.313	6.53	24.40	50	8.20	31.61	6.54	24.61	334	0.18
40	8.19	31.600	6.51	24.60	75	8.20	31.64	6.59	24.63	332	0.26
65	8.22	31.616	6.59	24.61	100	8.21	31.69	6.46	24.67	328	0.34
90	8.18	31.665	6.57	24.66	125	8.06	31.91	5.78	24.87	309	0.43
115	8.24	31.729	6.31	24.70	150	7.54	32.38	4.56	25.31	267	0.50
139	7.84	32.151	5.10	25.08	175	7.02	32.82	3.58	25.72	228	0.56
163	7.22	32.630	3.98	25.55	200	6.78	33.02	3.17	25.91	210	0.62
186	6.84	32.975	3.25	25.87							
230	6.65	33.112	3.01	26.00							

a) Value interpolated graphically.
b) Value extrapolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

63

CNAV OSHAWA; December 4, 1959; 0146 GCT; 54°40'N, 130°52'W; sounding, missing; wind, 220°, 5 kt; weather, partly cloudy; sea, smooth.

0	7.80	31.468	6.69	24.56	0	7.80	31.47	6.69	24.56	339	0.00
2	7.97	31.444	6.57	24.51	10	7.90	31.48	6.63	24.55	340	0.03
6	7.93	31.449	6.66	24.52	20	8.00	31.55	6.54	24.59	336	0.07
10	(7.90)a)	31.477	6.63	(24.55)	30	8.10	31.61	6.43	24.62	333	0.10
20	8.00	31.546	6.54	24.59	50	8.04	31.70	6.18	24.70	325	0.17
30	(8.10)a)	31.609	6.43	(24.62)	75	8.05	31.72	6.17	24.72	323	0.25
50	8.04	31.698	6.18	24.70	100	8.05	31.84	6.03	24.81	315	0.33
75	8.05	31.722	6.17	24.72	125	7.77	32.20	5.22	25.13	284	0.41
100	8.05	31.844	6.03	24.81	150	7.36	32.58	4.24	25.49	250	0.47
125	7.77	32.198	5.22	25.13	175	7.11	32.77	3.81	25.67	233	0.54
150	7.36	32.582	4.24	25.49	200	6.90	32.94	3.43	25.83	218	0.59
200	6.90	32.939	3.43	25.83	250	6.75	33.06	3.17	25.95	206	0.70
275	6.68	33.118	3.06	26.00							

64

CNAV OSHAWA; December 4, 1959; 0303 GCT; 54°39'N, 130°37'W; sounding, missing; wind, 140°, 15 kt; weather, overcast; sea, slight.

0	7.90	31.476	6.75	24.55	0	7.90	31.48	6.75	24.55	340	0.00
9	8.01	31.164	6.73	24.29	10	8.02	31.18	6.72	24.30	363	0.04
17	8.05	31.279	6.68	24.37	20	8.06	31.33	6.68	24.41	353	0.07
35	8.11	31.507	6.69	24.54	30	8.10	31.45	6.69	24.50	344	0.11
56	8.19	31.614	6.65	24.61	50	8.17	31.59	6.66	24.60	335	0.18
78	8.29	31.789	6.69	24.74	75	8.28	31.77	6.69	24.72	323	0.26
100	8.35	31.832	6.69	24.76	100	8.35	31.83	6.69	24.76	320	0.34
121	8.31	31.870	6.50	24.80	125	8.22	31.93	6.26	24.86	310	0.42
165	7.47	32.449	4.24	25.37	150	7.73	32.27	4.94	25.19	279	0.49
208	6.85	32.950	3.17	25.85	175	7.31	32.58	3.98	25.49	250	0.56
251	6.63	33.096	3.00	25.99	200	6.96	32.86	3.35	25.77	223	0.62
316	6.47	33.227	2.79	26.12	250	6.63	33.09	3.00	25.99	202	0.73
					300	6.51	33.20	2.83	26.09	193	0.83

65

CNAV OSHAWA; December 4, 1959; 0516 GCT; 54°20'N, 130°36'W; sounding, 59 fm; wind, 140°, 20 kt; weather, cloudy; sea, slight.

0	7.70	29.325	6.80	22.89	0	7.70	29.32	6.80	22.89	498	0.00
2	7.69	29.550	6.68	23.07	10	8.17	31.60	6.63	24.61	334	0.04
6	8.07	30.218	6.66	23.54	20	8.18	31.67	6.70	24.66	329	0.08
10	8.17	31.599	6.63	24.61	30	8.24	31.72	6.65	24.69	326	0.11
20	8.18	31.672	6.70	24.66	50	8.31	31.77	6.66	24.72	323	0.17
30	8.24	31.720	6.65	24.69	75	8.31	31.78	6.71	24.73	322	0.26
50	8.31	31.771	6.66	24.72	100	8.30	31.79	6.75	24.73	322	0.34
75	8.31	31.782	6.71	24.73							
100	(8.30)b)	31.786	6.75	(24.73)							

66

CNAV OSHAWA; December 4, 1959; 0718 GCT; 54°20'N, 131°14'W; sounding, 42 fm; wind, 140°, 30 kt; weather, overcast; sea, moderate.

0	7.60	31.688	6.63	24.76	0	7.60	31.69	6.63	24.76	320	0.00
2	7.67	31.676	6.45	24.74	10	7.62	31.68	6.46	24.75	320	0.03
6	7.61	31.679	6.54	24.75	20	7.64	31.73	6.43	24.79	317	0.06
10	7.62	31.685	6.46	24.75	30	7.66	31.75	6.36	24.80	316	0.10
19	7.64	31.732	6.44	24.78	50	7.67	31.77	6.35	24.81	315	0.16
29	7.66	31.753	6.36	24.80	75	7.72	31.88	6.05	24.89	307	0.24
48	7.67	31.755	6.38	24.80							
71	7.71	31.865	6.09	24.88							
75	(7.72)c)	(31.881)c)	(6.05)c)	(24.89)							

a) Value interpolated graphically.
b) Value extrapolated graphically.
c) Value extrapolated by two-point logarithmic method.

POG

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OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
67	CNAV OSHAWA; December 6, 1959; 1930 GCT; 54°10'N, 130°33'W; sounding, missing; wind, 140°, 15 kt; weather, cloudy; sea, slight.										
0	8.30	31.347	6.24	24.39	0	8.30	31.35	6.24	24.39	355	0.00
2	8.13	31.446	6.71	24.49	10	8.11	31.45	6.70	24.50	344	0.04
6	8.11	31.456	6.57	24.50	20	8.13	31.47	6.76	24.51	343	0.07
10	8.11	31.451	6.70	24.50	30	8.16	31.48	6.81	24.51	343	0.10
20	8.13	31.467	6.76	24.51	50	8.16	31.48	6.15	24.52	342	0.17
30	8.16	31.475	6.81	24.51	75	8.24	31.56	6.12	24.57	338	0.26
49	8.16	31.481	6.15	24.51	100	8.24	31.66	5.97	24.64	331	0.34
74	8.24	31.557	6.13	24.56	125	8.27	31.72	6.71	24.69	326	0.43
98	8.24	31.658	5.90	24.64							
123	8.27	31.718	6.65	24.68							
125	(8.27)a)	(31.722)a)	(6.71)a)	(24.69)							
68	CNAV OSHAWA; December 6, 1959; 2051 GCT; 54°20'N, 130°46'W; sounding, 36 fm; wind, 180°, 10 kt; weather, moderate rain; sea, missing.										
0	8.10	31.634	6.60	24.64	0	8.10	31.63	6.60	24.64	331	0.00
2	8.21	31.677	6.84	24.66	10	8.21	31.73	6.92	24.70	325	0.03
6	8.22	31.721	6.90	24.69	20	8.22	31.73	6.92	24.70	325	0.07
10	8.21	31.728	6.92	24.70	30	8.22	31.73	6.92	24.70	325	0.10
20	8.22	31.729	6.92	24.70	50	8.24	31.74	6.84	24.71	324	0.16
30	8.22	31.734	6.92	24.70							
50	8.24	31.741	6.84	24.71							
69	CNAV OSHAWA; December 6, 1959; 2143 GCT; 54°19'N, 130°51'W; sounding, missing; wind, 180°, 10 kt; weather, moderate to heavy drizzle and snow; sea, missing.										
0	8.10	31.457	6.92	24.50	0	8.10	31.46	6.92	24.50	344	0.00
2	8.19	31.629	6.84	24.63	10	8.25	31.72	6.84	24.69	326	0.03
6	8.21	31.701	6.80	24.68	20	8.30	31.75	6.87	24.70	325	0.07
10	8.25	31.719	6.84	24.69	30	8.27	31.77	6.79	24.73	322	0.10
20	(8.30)b)	31.748	6.87	(24.70)	50	8.33	31.79	6.79	24.73	322	0.16
30	8.27	31.773	6.79	24.73	75	8.33	31.79	6.78	24.73	322	0.25
50	8.33	31.790	6.79	24.73	100	8.33	31.83	6.72	24.76	320	0.33
75	8.33	31.792	6.78	24.73	125	8.36	31.85	6.74	24.77	319	0.41
100	8.33	31.826	6.72	24.76	150	8.33	31.86	6.74	24.79	317	0.49
125	8.36	31.846	6.74	24.77							
150	8.33	31.861	6.74	24.79							
70	CNAV OSHAWA; December 6, 1959; 2250 GCT; 54°19'N, 131°04'W; sounding, missing; wind, 180°, 10 kt; weather, squalls; sea, slight.										
0	8.10	31.663	6.96	24.67	0	8.10	31.66	6.96	24.67	328	0.00
2	7.79	31.785	6.91	24.80	10	7.77	31.77	6.82	24.80	316	0.03
6	7.75	31.789	6.83	24.81	20	7.76	31.78	6.84	24.81	315	0.06
10	7.77	31.773	6.82	24.80	30	7.82	31.83	7.00	24.84	312	0.10
20	7.76	31.782	6.84	24.81	50	7.87	31.88	6.96	24.86	310	0.16
30	7.82	31.833	7.00	24.84	75	7.99	31.95	7.02	24.91	305	0.24
50	7.87	31.875	6.96	24.86							
80	8.01	31.967	7.03	24.92							
71	CNAV OSHAWA; December 7, 1959; 0015 GCT; 53°56'N, 130°59'W; sounding, 45 fm; wind, 230°, 10 kt; weather, cloudy; sea, slight.										
0	7.60	31.318	6.85	24.47	0	7.60	31.32	6.85	24.47	347	0.00
4	7.95	31.378	6.82	24.46	10	8.14	31.66	6.78	24.65	330	0.03
14	8.24	31.797	6.75	24.75	20	8.27	31.82	6.72	24.76	320	0.07
33	8.31	31.848	6.66	24.78	30	8.30	31.84	6.68	24.78	318	0.10
58	8.34	31.903	6.63	24.82	50	8.33	31.89	6.64	24.81	315	0.16

a) Value extrapolated by two-point logarithmic method.
b) Value interpolated graphically.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

72

CNAV OSHAWA; December 7, 1959; 0257 GCT; 53°38'N, 130°54'W; sounding, 25 fm; wind, 230°, 10 kt; weather, partly cloudy; sea, slight.

0	8.60	32.100	6.63	24.93	0	8.60	32.10	6.63	24.93	303	0.00
2	8.43	32.087	6.60	24.95	10	8.42	32.09	6.55	24.95	301	0.03
6	8.43	32.088	6.55	24.95	20	8.43	32.10	6.51	24.96	300	0.06
10	8.42	32.091	6.55	24.95	30	8.44	32.10	6.55	24.96	300	0.09
20	8.43	32.104	6.51	24.96							
30	8.44	32.105	6.55	24.96							
40	8.43	32.110	6.57	24.97							

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CNAV OSHAWA; December 7, 1959; 0345 GCT; 53°39'N, 130°45'W; sounding, 66 fm; wind, 230°, 12 kt; weather, partly cloudy; sea, slight. [a]

0	8.20	31.836	6.64	24.79	0	8.20	31.84	6.64	24.79	317	0.00
2	8.23	31.830	6.74	24.78	10	8.23	31.83	6.75	24.78	318	0.03
6	8.22	31.826	6.75	24.78	20	8.37	31.97	6.71	24.87	309	0.06
10	8.23	31.832	6.75	24.78	30	8.40	32.00	6.73	24.88	308	0.10
20	8.37	31.969	6.71	24.87	50	8.46	32.01	6.71	24.88	308	0.16
30	8.40	31.996	6.73	24.88	75	8.42	32.04	6.63	24.91	305	0.23
50	8.46	32.010	6.71	24.88	100	8.40	32.10	6.33	24.96	300	0.31
75	8.42	32.037	6.63	24.91							
100	8.40	32.100	6.33	24.96							

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CNAV OSHAWA; December 7, 1959; 0440 GCT; 53°39'N, 130°37'W; sounding, 32 fm; wind, 230°, 10 kt; weather, partly cloudy; sea, slight.

0	8.20	31.638	6.87	24.63	0	8.20	31.64	6.87	24.63	332	0.00
4	8.15	31.626	6.92	24.63	20	8.23	31.77	6.84	24.73	322	0.07
8	8.22	31.720	6.85	24.69	30	8.25	31.79	6.83	24.75	320	0.10
18	8.23	31.763	6.84	24.72	50	8.25	31.84	6.82	24.78	318	0.16
28	8.25	31.788	6.83	24.74							
48	8.25	31.839	6.82	24.78							
50	(8.25)b)	(31.843)b)	(6.82)b)	(24.78)							

75

CNAV OSHAWA; December 7, 1959; 0858 GCT; 53°39'N, 130°37'W; sounding, 30 fm; wind, 270°, 9 kt; weather, clear; sea, slight.

0	8.20	31.350	6.81	24.41	0	8.20	31.35	6.81	24.41	353	0.00
2	8.00	31.316	6.82	24.41	10	8.15	31.51	6.91	24.54	340	0.04
6	8.01	31.330	6.82	24.42	20	8.22	31.69	7.01	24.67	328	0.07
10	8.15	31.508	6.91	24.54	30	8.28	31.81	6.81	24.76	320	0.10
20	8.22	31.692	7.01	24.67							
30	8.28	31.813	6.81	24.76							
40	8.26	31.833	6.80	24.78							

76

CNAV OSHAWA; December 7, 1959; 0952 GCT; 53°39'N, 130°44'W; sounding, 56 fm; wind, 220°, 10 kt; weather, clear; sea, slight. [c]

0	8.20	31.841	6.85	24.79	0	8.20	31.84	6.85	24.79	317	0.00
2	8.22	31.823	6.85	24.77	10	8.23	31.82	6.79	24.77	319	0.03
6	8.23	31.823	7.15	24.77	20	8.26	31.88	6.75	24.81	315	0.06
10	8.23	31.823	6.79	24.77	30	8.35	31.94	6.75	24.84	312	0.10
20	8.26	31.877	6.75	24.81	50	8.35	31.98	6.53	24.87	309	0.16
30	8.35	31.935	6.75	24.84	75	8.43	32.04	6.33	24.91	305	0.24
50	8.35	31.977	6.53	24.87							
80	8.44	32.051	6.29	24.92							

a) The following nitrate values were obtained for this station: 0 m, 7.2; 6, 3.7; 10, 7.1; 50, 6.5; 100, 14.5 µg at/L.
b) Value extrapolated by two-point logarithmic method.
c) The following nitrate values were obtained for this station: 0 m, 13.3; 6, 14.2; 10, 13.9; 50, 14.1; 80, 14.4 µg at/L.

	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
77	CNAV OSHAWA; December 7, 1959; 1049 GCT; 53°39'N, 130°56'W; sounding, 26 fm; wind, 220°, 10 kt; weather, clear; sea, slight.											
	0	8.00	32.109	6.65	25.03	0	8.00	32.11	6.65	25.03	294	0.00
	2	8.38	32.082	6.64	24.95	10	8.39	32.08	6.62	24.95	301	0.03
	6	8.39	32.087	6.43	24.95	20	8.41	32.08	6.60	24.94	302	0.06
	10	8.39	32.076	6.62	24.95	30	8.40	32.09	6.69	24.95	301	0.09
	20	8.41	32.078	6.60	24.94							
	30	8.40	32.087	6.69	24.95							
	40	8.38	32.079	6.59	24.95							
78	CNAV OSHAWA; December 7, 1959; 1332 GCT; 53°15'N, 131°10'W; sounding, missing; wind, 230°, 12 kt; weather, partly cloudy; sea, slight.[a]											
	0	8.30	32.214	6.56	25.07	0	8.30	32.21	6.56	25.07	290	0.00
	2	8.35	32.195	6.53	25.04	10	8.38	32.19	6.55	25.04	293	0.03
	6	8.35	32.216	6.55	25.06	20	8.34	32.20	6.55	25.05	292	0.06
	10	8.38	32.193	6.55	25.04	30	8.33	32.21	6.51	25.06	291	0.09
	20	8.34	32.199	6.55	25.05							
	30	8.33	32.207	6.51	25.06							
79	CNAV OSHAWA; December 7, 1959; 1431 GCT; 53°15'N, 131°27'W; sounding, 17 fm; wind, 230°, 15 kt; weather, partly cloudy; sea, slight.											
	0	8.30	32.199	6.64	25.06	0	8.30	32.20	6.64	25.06	291	0.00
	2	8.33	32.181	6.69	25.04	10	8.34	32.18	6.64	25.04	293	0.03
	6	8.34	32.185	6.69	25.04	20	8.35	32.19	6.68	25.04	293	0.06
	10	8.34	32.184	6.64	25.04							
	20	8.35	32.187	6.68	25.04							
	25	8.34	32.179	6.64	25.03							
80	CNAV OSHAWA; December 7, 1959; 1526 GCT; 53°15'N, 131°37'W; sounding, 18 fm; wind, 230°, 10 kt; weather, partly cloudy; sea, slight.											
	0	8.20	31.832	6.66	24.78	0	8.20	31.83	6.66	24.78	318	0.00
	2	8.23	31.838	6.68	24.78	10	8.30	31.90	6.64	24.82	314	0.03
	6	8.26	31.840	6.66	24.78							
	16	8.35	31.969	6.61	24.87							
81	CNAV OSHAWA; December 7, 1959; 1746 GCT; 53°14'N, 132°01'W; sounding, 44 fm; wind, 220°, 15 kt; weather, cloudy; sea, slight.											
	0	7.80	28.550	6.89	22.27	0	7.80	28.55	6.89	22.27	557	0.00
	2	7.65	28.351	6.93	22.14	10	8.02	30.59	6.73	23.84	407	0.05
	6	8.05	30.342	6.78	23.64	20	7.95	31.07	6.73	24.22	371	0.09
	10	8.02	30.590	6.73	23.84	30	7.93	31.10	6.76	24.25	368	0.12
	20	7.95	31.072	6.73	24.22	50	7.96	31.12	6.73	24.26	367	0.20
	30	7.93	31.098	6.76	24.25	75	7.93	31.15	6.73	24.29	364	0.29
	50	7.96	31.122	6.73	24.26							
	75	7.93	31.150	6.73	24.29							
82	CNAV OSHAWA; December 8, 1959; 2245 GCT; 52°59'N, 130°16'W; sounding, 120 fm; wind, 140°, 40 kt; weather, overcast; sea, slight.[b]											
	0	8.50	32.268	6.69	25.08	0	8.50	32.27	6.69	25.08	289	0.00
	10	8.52	32.236	6.65	25.05	10	8.52	32.24	6.65	25.05	292	0.03
	20	8.47	32.236	(6.71)c)	25.06	20	8.47	32.24	6.71	25.06	291	0.06
	30	8.48	32.205	6.74	25.03	30	8.48	32.20	6.74	25.03	294	0.09
	50	8.54	32.244	6.66	25.05	50	8.54	32.24	6.66	25.05	292	0.15
	75	8.59	32.300	6.64	25.09	75	8.59	32.30	6 64	25.09	288	0.22
	100	8.62	32.317	6.64	25.10	100	8.62	32.32	6.64	25.10	287	0.29
	125	8.68	32.419	6.40	25.17	125	8.68	32.42	6.40	25.17	280	0.36
	150	8.37	32.583	5.53	25.35	150	8.37	32.58	5.53	25.35	263	0.43
	175	7.93	32.930	4.87	25.68	175	7.93	32.93	4.87	25.68	232	0.50
	200	7.37	33.191	4.30	25.97	200	7.37	33.19	4.30	25.97	204	0.55

a) The following nitrate values were obtained for this station: 0 m, 13.8; 6, 11.3; 10, 11.3; 30, 12.9 μg at/L.

b) The following nitrate values were obtained for this station: 0 m, 12.2; 10, 13.5; 20, 13.5; 50, 13.0; 100, 9.6; 200, 19.2 μg at/L.

c) Value interpolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

CNAV OSHAWA; December 9, 1959; 0019 GCT; 53°00'N, 129°58'W; sounding, 128 fm; wind, 170°, 40 kt; weather, overcast; sea, rough. 83

0	8.00	32.015	6.63	24.96	0	8.00	32.02	6.63	24.96	300	0.00
2	8.26	31.990	6.64	24.90	10	8.22	32.02	6.59	24.93	303	0.03
6	8.21	31.990	6.61	24.91	20	8.26	32.02	6.54	24.92	304	0.06
10	8.22	32.020	6.59	24.93	30	8.32	32.09	6.37	24.97	300	0.09
19	8.25	32.007	6.56	24.91	50	8.40	32.17	6.29	25.02	295	0.15
29	8.32	32.083	6.38	24.96	75	8.55	32.27	6.46	25.07	290	0.23
48	8.38	32.161	6.28	25.01	100	8.60	32.32	6.50	25.10	287	0.30
72	8.55	32.260	6.45	25.07	125	8.65	32.37	6.42	25.14	283	0.37
96	8.57	32.303	6.50	25.10	150	8.21	32.41	5.98	25.23	274	0.44
120	8.72	32.370	6.52	25.13	175	7.74	32.52	5.59	25.39	260	0.51
143	8.41	32.389	6.06	25.19	200	7.70	32.71	4.93	25.54	245	0.57
167	7.75	32.454	5.81	25.33							
215	7.68	32.814	4.57	25.63							

CNAV OSHAWA; December 9, 1959; 0320 GCT; 52°28'N, 130°00'W; sounding, 150 fm; wind, 160°, 42 kt; weather, intermittent moderate rain; sea, very rough. 84

0	8.10	32.214	6.25	25.10	0	8.10	32.21	6.25	25.10	287	0.00
9	8.45	32.249	6.66	25.07	10	8.45	32.25	6.66	25.07	290	0.03
17	8.44	32.257	6.63	25.08	20	8.44	32.27	6.63	25.09	288	0.06
43	8.45	32.328	6.65	25.13	30	8.45	32.30	6.64	25.11	286	0.09
65	8.42	32.616	5.86	25.36	50	8.44	32.43	6.37	25.22	276	0.14
87	7.75	32.883	5.07	25.67	75	8.09	32.75	5.48	25.51	248	0.21
130	6.96	33.415	3.75	26.20	100	7.48	33.06	4.63	25.85	216	0.27
					125	7.04	33.36	3.89	26.15	187	0.32

CNAV OSHAWA; December 9, 1959; 1923 GCT; 52°16'N, 128°36'W; sounding, missing; wind, 140°, 20 kt; weather, overcast; sea, slight. 85

0	7.20	25.903	6.83	20.28	0	7.20	25.90	6.83	20.28	748	0.00
8	7.10	26.337	6.93	20.63	10	7.23	27.52	6.55	21.54	627	0.07
16	7.54	30.464	5.61	23.80	20	7.57	30.66	5.67	23.96	396	0.12
24	7.60	30.835	5.71	24.09	30	7.73	30.97	5.91	24.17	376	0.16
39	7.90	31.136	6.17	24.28	50	8.09	31.40	6.55	24.46	348	0.23
59	8.22	31.579	6.82	24.58	75	8.32	31.75	6.70	24.70	325	0.32
79	8.34	31.785	6.68	24.73	100	8.47	32.12	6.20	24.96	300	0.40
98	8.48	32.069	6.33	24.93	125	8.15	32.65	4.91	25.43	256	0.47
118	8.40	32.499	5.19	25.28	150	7.29	33.19	3.81	25.97	204	0.53
138	7.73	32.903	4.41	25.69	175	6.87	33.49	3.37	26.27	176	0.57
158	7.01	33.364	3.43	26.15							
177	6.85	33.509	3.36	26.29							

CNAV OSHAWA; December 9, 1959; 2044 GCT; 52°12'N, 128°43'W; sounding, 132 fm; wind, 140°, 42 kt; weather, slight rain showers; sea, moderate. 86

0	7.90	31.586	6.78	24.63	0	7.90	31.59	6.78	24.63	332	0.00
9	8.18	31.577	6.74	24.59	10	8.17	31.58	6.73	24.59	336	0.03
17	8.13	31.607	6.68	24.62	20	8.14	31.60	6.81	24.61	334	0.07
26	8.15	31.577	7.04	24.59	30	8.16	31.58	6.97	24.59	336	0.10
43	8.19	31.603	6.74	24.61	50	8.24	31.72	6.71	24.69	326	0.17
65	8.34	31.933	6.66	24.84	75	8.43	32.01	6.60	24.89	307	0.25
87	8.53	32.089	6.52	24.94	100	8.67	32.23	6.56	25.03	294	0.32
108	8.75	32.314	6.60	25.08	125	8.56	32.46	6.20	25.22	276	0.40
130	8.51	32.506	6.09	25.26	150	7.94	32.84	5.23	25.61	239	0.46
151	7.91	32.852	5.19	25.62	175	7.45	33.25	4.17	26.00	202	0.52
173	7.49	33.221	4.24	25.97							
175	(7.45)a)	(33.252)a)	(4.17)a)	(26.00)							

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m
87	CNAV OSHAWA; December 10, 1959; 0250 GCT; 51°26'N, 127°49'W; sounding, 55 fm; wind, 140°, 20 kt; weather, overcast; sea, slight.										
0	7.70	27.559	6.64	21.51	0	7.70	27.56	6.64	21.51	630	0.00
2	7.73	28.288	6.64	22.08	10	7.85	30.64	6.45	23.90	402	0.05
6	7.82	29.893	6.54	23.32	20	7.83	31.01	6.23	24.19	374	0.09
10	7.85	30.640	6.45	23.90	30	7.89	31.22	6.28	24.35	359	0.13
20	7.83	31.011	6.23	24.19	50	8.12	31.59	5.81	24.60	335	0.20
30	7.89	31.222	6.28	24.35	75	8.29	31.94	5.66	24.85	311	0.28
50	8.12	31.586	5.81	24.60	100	8.50	32.29	5.38	25.09	288	0.36
75	8.29	31.936	5.66	24.85							
90	8.42	32.157	5.48	25.00							
100	(8.50)a)	(32.287)a)	(5.38)a)	(25.09)							
88	CNAV OSHAWA; December 10, 1959; 1742 GCT; 50°28'N, 126°10'W; sounding, 120 fm; wind, 100°, 10 kt; weather, cloudy; sea, slight.										
0	8.10	31.031	5.36	24.17	0	8.10	31.03	5.36	24.17	376	0.00
9	8.20	31.081	5.39	24.20	10	8.19	31.08	5.39	24.20	373	0.04
17	8.14	31.097	5.36	24.22	20	8.14	31.11	5.36	24.22	371	0.08
26	8.14	31.122	5.38	24.24	30	8.13	31.13	5.36	24.24	369	0.11
43	8.11	31.154	5.32	24.27	50	8.11	31.20	5.34	24.30	363	0.19
65	8.10	31.290	5.38	24.37	75	8.10	31.37	5.38	24.43	351	0.28
87	8.11	31.449	5.36	24.50	100	8.11	31.44	5.35	24.49	345	0.36
108	8.11	31.439	5.34	24.49	125	8.09	31.46	5.32	24.51	343	0.45
130	8.08	31.466	5.32	24.51	150	8.08	31.50	5.33	24.54	340	0.54
151	8.08	31.496	5.33	24.54	175	8.03	31.52	5.39	24.56	339	0.62
173	8.03	31.516	5.39	24.56							
175	(8.03)a)	(31.518)a)	(5.39)a)	(24.56)							
89	CNAV OSHAWA; December 10, 1959; 1814 GCT; 50°29'N, 126°10'W; sounding, 90 fm; wind, 100°, 10 kt; weather, overcast; sea, slight.										
0	8.20	30.853	5.51	24.02	0	8.20	30.85	5.51	24.02	390	0.00
9	8.18	30.854	5.50	24.02	10	8.17	30.86	5.49	24.03	389	0.04
18	8.13	30.926	5.43	24.08	20	8.13	30.93	5.42	24.09	383	0.08
26	8.13	30.956	5.41	24.11	30	8.13	30.96	5.40	24.11	382	0.12
44	8.13	30.974	5.36	24.12	50	8.13	31.01	5.36	24.15	378	0.19
66	8.13	31.083	5.38	24.21	75	8.13	31.14	5.38	24.25	368	0.29
88	8.13	31.214	5.36	24.31	100	8.14	31.30	5.35	24.38	356	0.38
110	8.14	31.363	5.35	24.42	125	8.11	31.44	5.44	24.49	345	0.47
132	8.10	31.470	5.48	24.51							
90	CNAV OSHAWA; December 10, 1959; 2250 GCT; 50°00'N, 125°12'W; sounding, missing; wind, 140°, 10 kt; weather, intermittent slight drizzle; sea, missing.										
0	9.00	29.238	5.29	22.64	0	9.00	29.24	5.29	22.64	522	0.00
4	8.42	29.154	5.36	22.66	10	8.45	29.34	5.15	22.80	506	0.05
14	8.47	29.435	5.04	22.87	20	8.48	29.46	4.97	22.89	498	0.10
34	8.51	29.499	4.87	22.92	30	8.50	29.49	4.89	22.91	496	0.15
49	8.53	29.527	4.93	22.93	50	8.53	29.53	4.93	22.94	493	0.25
50	(8.53)a)	(29.529)a)	(4.93)a)	(22.94)							
91	CNAV OSHAWA; December 10, 1959; 2314 GCT; 49°59'N, 125°13'W; sounding, missing; wind, 140°, 10 kt; weather, intermittent slight drizzle; sea, missing.										
0	8.50	28.947	5.44	22.49	0	8.50	28.95	5.44	22.49	536	0.00
10	8.42	29.173	5.38	22.67	10	8.42	29.17	5.38	22.67	519	0.05
20	8.48	29.269	5.17	22.74	20	8.48	29.27	5.17	22.74	512	0.10
30	8.50	29.450	5.08	22.88	30	8.50	29.45	5.08	22.88	499	0.16

a) Value extrapolated by two-point logarithmic method.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	ml/L	g/L	cl/ton	dyn m

92

CNAV OSHAWA; December 11, 1959; 0046 GCT; 49°50'N, 124°52'W; sounding, 150 fm; wind, 140°, 30 kt; weather, overcast; sea, slight.

0	8.30	28.934	6.13	22.50	0	8.30	28.93	6.13	22.50	535	0.00
8	8.19	28.888	6.07	22.48	10	8.19	28.89	6.06	22.49	536	0.05
21	8.19	28.899	6.00	22.49	20	8.19	28.90	6.00	22.49	536	0.11
42	8.65	29.415	4.70	22.83	30	8.42	29.15	5.36	22.66	520	0.16
84	9.14	30.147	3.34	23.33	50	8.77	29.59	4.38	22.95	492	0.26
126	9.31	30.511	2.99	23.59	75	9.06	30.02	3.57	23.24	464	0.38
168	9.35	30.689	3.17	23.72	100	9.21	30.30	3.19	23.44	445	0.50
210	9.25	30.798	3.15	23.82	125	9.31	30.50	3.00	23.58	432	0.61
					150	9.33	30.62	3.10	23.67	423	0.72
					175	9.33	30.71	3.17	23.74	417	0.82
					200	9.27	30.77	3.15	23.80	411	0.93

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CNAV OSHAWA; December 11, 1959; 0149 GCT; 49°43'N, 124°49'W; sounding, missing; wind, 140°, 30 kt; weather, overcast; sea, moderate.

0	8.40	29.233	5.71	22.72	0	8.40	29.23	5.71	22.72	514	0.00
2	8.43	29.241	5.61	22.73	10	8.42	29.24	5.56	22.73	513	0.05
9	8.41	29.235	5.57	22.72	20	8.46	29.28	5.42	22.75	511	0.10
22	8.47	29.289	5.40	22.76	30	8.83	29.40	5.10	22.79	508	0.16
44	9.32	29.559	4.69	22.84	50	9.16	29.63	4.58	22.93	494	0.26
66	8.79	29.799	4.33	23.11	75	8.80	29.86	4.13	23.15	473	0.38
75	8.80	29.859	4.13	23.15							

94

CNAV OSHAWA; December 11, 1959; 0233 GCT; 49°44'N, 124°41'W; sounding, missing; wind, 140°, 32 kt; weather, intermittent moderate rain; sea, rough.

0	8.30	28.370	6.24	22.06	0	8.30	28.37	6.24	22.06	577	0.00
9	8.25	28.400	6.17	22.09	10	8.26	28.44	6.15	22.12	572	0.06
23	8.40	28.837	5.90	22.41	20	8.37	28.76	5.95	22.36	549	0.11
46	8.61	29.120	5.35	22.61	30	8.48	28.94	5.70	22.48	537	0.17
92	9.32	30.122	3.40	23.28	50	8.69	29.24	5.13	22.68	518	0.28
138	9.41	30.589	3.17	23.63	75	9.10	29.82	4.00	23.08	480	0.40
184	9.32	30.747	3.17	23.77	100	9.34	30.22	3.36	23.35	454	0.52
250	9.25	30.832	3.17	23.84	125	9.39	30.47	3.23	23.54	436	0.63
					150	9.38	30.64	3.17	23.67	423	0.74
					175	9.34	30.72	3.17	23.74	417	0.85
					200	9.30	30.77	3.17	23.79	412	0.95
					250	9.25	30.83	3.17	23.84	407	1.16

95

CNAV OSHAWA; December 11, 1959; 0847 GCT; 48°49'N, 123°17'W; sounding, 94 fm; wind, 140°, 30 kt; weather, intermittent moderate rain; sea, slight.

0	9.20	28.672	5.28	22.17	0	9.20	28.67	5.28	22.17	567	0.00
10	8.75	28.705	5.16	22.26	10	8.75	28.70	5.16	22.26	558	0.06
25	9.19	29.781	4.08	23.04	20	9.07	29.48	4.38	22.82	505	0.11
50	9.37	30.144	3.60	23.29	30	9.23	29.87	3.95	23.10	478	0.16
100	9.20	30.555	3.68	23.64	50	9.37	30.14	3.60	23.29	460	0.25
125	9.11	30.654	3.73	23.73	75	9.27	30.38	3.65	23.49	441	0.37
150	9.09	30.777	3.62	23.83	100	9.20	30.56	3.68	23.64	426	0.48
					125	9.11	30.65	3.73	23.73	418	0.58
					150	9.09	30.78	3.62	23.83	408	0.69

Date	Time GCT	Latitude North	Longitude West	T °C	S ‰
		San Juan Islands to Swiftsure Bank Lightship			
XI-19	0043	48°35.2'	122°45.2'	8.5	30.495
19	0109	48°29.6'	122°44.2'	8.3	30.296
19	0131	48°24.5'	122°48.0'	8.4	30.671
19	0154	48°23.0'	122°56.0'	8.5	30.763
19	0230	48°20.5'	123°09.5'	8.3	31.044
19	0300	48°18.2'	123°20.3'	8.2	31.171
19	1515	48°26.8'	124°34.2'	9.3	31.979
19	1545	48°30.6'	124°42.8'	8.8	32.187
		Cape Flattery to Columbia River Entrance			
XI-20	0000	48°09.0'	124°57.5'	9.7	32.201
20	0045	48°03.0'	125°00.0'	9.1	32.240
20	0140	47°55.0'	125°03.5'	9.7	32.237
20	0210	47°49.0'	124°56.0'	10.7	32.322
20	0305	47°43.0'	124°50.0'	12.2	32.339
20	0345	47°38.0'	124°42.0'	10.7	31.619
20	0430	47°31.0'	124°33.0'	11.0	31.553
20	0530	47°25.0'	124°38.0'	11.0	31.724
20	0635	47°19.0'	124°42.0'	10.8	32.083
20	0740	47°12.0'	124°45.0'	11.5	32.102
20	0905	47°06.0'	124°49.0'	12.3	32.181
20	1040	46°53.0'	124°42.0'	11.6	31.995
20	1200	46°42.0'	124°35.0'	11.5	32.026
20	1320	46°33.0'	124°29.0'	10.7	31.758
20	1518	46°23.0'	124°22.0'	10.7	31.204
		Columbia River Entrance and along West Coast of Vancouver Island			
XI-24	0730	46°20.0'	124°58.0'	12.1	31.978
24	0822	46°29.0'	124°50.0'	11.5	31.425
24	1030	46°40.1'	124°45.5'	11.1	31.935
24	1115	46°56.0'	124°46.0'	11.6	32.172
24	1315	47°11.0'	125°01.0'	11.7	32.210
24	1355	47°16.0'	125°12.0'	11.7	32.304
24	1650	47°30.0'	125°16.0'	11.7	32.337
24	1740	47°37.0'	125°13.0'	11.4	32.292
24	1820	47°48.0'	125°08.0'	11.2	32.192
24	2000	48°01.0'	125°11.5'	11.6	32.304
24	2030	48°04.6'	125°21.0'	11.4	32.225
27	2050	48°32.5'	126°23.0'	10.6	32.389
27	2131	48°39.7'	126°30.0'	10.6	32.404
27	2218	48°46.0'	126°43.0'	10.9	32.467
27	2300	48°54.0'	126°56.0'	10.9	32.488
28	0145	48°16.0'	127°07.0'	10.4	32.433
28	0225	49°23.0'	127°17.0'	9.9	32.404
28	0300	49°30.0'	127°23.0'	10.3	32.424
28	0345	49°36.0'	127°30.0'	9.9	32.409
28	0420	49°44.0'	127°41.0'	10.1	32.405
28	0503	49°51.0'	127°41.0'	9.1	32.085
28	1610	50°10.0'	129°11.0'	10.8	32.552
28	2114	50°46.0'	130°24.0'	10.6	32.429
		In Johnstone Strait			
XII-10	1930	50°83.2'	125°49.2'	8.6	31.066
10	1942	50°22.2'	125°44.7'	8.6	30.282
10	2010	50°22.4'	125°34.8'	8.4	30.030
10	2022	50°20.7'	125°30.0'	8.5	30.125
10	2035	50°20.2'	125°25.5'	8.6	29.789
10	2115	50°16.5'	125°23.7'	8.7	29.651
10	2150	50°07.8'	125°01.1'	8.7	29.582
11	0621	49°12.6'	123°46.0'	9.3	29.596

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

USCGSS EXPLORER; May 26, 1959; 0100 GCT; 51°59'N, 174°22'W; sounding, 98 m; wind, 100°, 4 m/sec; weather, overcast; sea, moderate. 1

0	4.39	33.03	26.20	0	4.39	33.03	26.20	183a)	0.00
10	4.34	33.03	26.21	10	4.34	33.03	26.21	182	0.02
20	4.31	33.04	26.22	20	4.31	33.04	26.22	181	0.04
35	4.24	33.04	26.23	30	4.27	33.04	26.22	181	0.05
50	4.11	33.11	26.30	50	4.11	33.11	26.30	173	0.09
65	4.11	33.09	26.28						

USCGSS EXPLORER; May 26, 1959; 2200 GCT; 51°50'N, 174°22'W; sounding, 188 m; wind, 140°, 5 m/sec; weather, fog; sea, slight. 3

2	4.50	32.96	26.14	0	(4.50)	(32.96)	(26.14)	(188)	(0.00)
11	4.10	33.16	26.34	10	4.13	33.15	26.33	170	0.02
20	4.02	33.20	26.38	20	4.02	33.20	26.38	166	0.04
29	3.92	33.28	26.45	30	3.92	33.28	26.45	159	0.05
				50	3.84	33.35	26.51	153	0.08
37	3.89	33.29	26.46	75	3.83	33.41	26.56	148	0.12
38	-	33.32		100	3.79	33.40	26.56	148	0.16
47	3.84	33.34	26.51						
70	3.84	33.41	26.56						
93	3.80	33.40	26.56						
140	3.79	33.43	26.58						

USCGSS EXPLORER; June 4, 1959; 2300 GCT; 51°41'N, 174°24'W; sounding, 2926 m; wind, 160°, 7 m/sec; weather, overcast; sea, slight. 5

0	5.80	32.62	25.72	0	5.80	32.62	25.72	228	0.00
10	5.81	32.62	25.72	10	5.81	32.62	25.72	228	0.02
20	5.79	32.63	25.73	20	5.79	32.63	25.73	227	0.05
30	5.67	32.64	25.75	30	5.67	32.64	25.75	225	0.07
50	4.67	32.76	25.96	50	4.67	32.76	25.96	205	0.11
75	3.93u	33.15u	26.35	75	4.37	32.88	26.09	193	0.16
				100	3.59	32.99	26.25	178	0.21
85	4.14	32.93	26.15	150	3.93	33.49	26.62	143	0.29
106	3.46	33.02	26.29	200	4.20	33.83	26.86	120	0.36
149	3.92	33.48	26.61	250	4.14	33.94	26.95	111	0.41
195	4.20	33.82	26.85	300	4.08	34.01	27.01	106	0.47
288	4.08	34.00	27.01	400	3.74	34.09	27.11	96	0.57
384	3.84	34.08	27.09	500	3.65	34.18	27.19	89	0.67
				600	3.45	34.24	27.26	82	0.76
406	3.71	34.10	27.12	800	3.11	34.35	27.38	71	0.92
489	3.68	34.17	27.18	1000	2.77	34.41	27.46	63	1.07
579	3.48	34.22	27.24	1200	2.49	34.47	27.53	56	1.20
667	3.34	34.28	27.30	1500	2.19	34.56	27.63	47	1.38
760	3.15	34.33	27.36	2000	1.83	34.60	27.69	41	1.64
956	2.87	34.40	27.44						
1054	2.67	-							
1235	2.45	34.48	27.54						
1510	2.18	34.56	27.63						
1982	1.84	34.60	27.69						
2470	1.82	34.64	27.72						

a) Values of thermosteric anomaly were computed by the Data Collecting and Processing Group of Scripps Institution.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
2	USCGSS EXPLORER; June 7, 1959; 2100 GCT; 51°56'N, 174°22'W; sounding, 110 m; wind, 320°, 3 m/sec; weather, partly cloudy; sea, smooth.								
0	5.20	32.65	25.81	0	5.20	32.65	25.81	220	0.00
5	4.96	32.69	25.87	10	4.80	32.75	25.94	207	0.02
15	4.65	32.83	26.02	20	4.48	32.99	26.16	186	0.04
25	4.35	33.09	26.26	30	4.26	33.11	26.28	175	0.06
34	4.20	33.13	26.30	50	4.15	33.24	26.40	164	0.09
54	4.14	33.26	26.41	75	4.11	33.28	26.43	161	0.13
78	4.11	33.28	26.43						
4	USCGSS EXPLORER; June 18, 1959; 2300 GCT; 51°45'N, 174°22'W; sounding, 2195 m; wind, calm; weather, overcast; sea, slight.								
0	6.61	32.55	25.56	0	6.61	32.55	25.56	243	0.00
10	6.57	32.55	25.57	10	6.57	32.55	25.57	242	0.02
20	4.51	32.83	26.03	20	4.51	32.83	26.03	199	0.05
30	4.66	33.00	26.15	30	4.66	33.00	26.15	187	0.07
50	4.30	33.21	26.36	50	4.30	33.21	26.36	167	0.10
75	4.23	33.26	26.40	75	4.23	33.26	26.40	164	0.14
				100	4.26	33.26	26.40	164	0.18
87	4.24	33.28	26.42	150	4.17	33.36	26.49	155	0.26
96	4.25	33.26	26.40	200	4.13	33.38	26.51	153	0.34
105	4.27	33.26	26.40	250	4.18	33.50	26.60	145	0.42
				300	4.15	33.65	26.72	133	0.49
111	4.24	33.32	26.45	400	4.05	33.99	27.00	107	0.61
				500	3.76	34.09	27.11	96	0.72
115	4.26	33.27	26.41	600	3.59	34.19	27.21	87	0.81
				800	3.27	34.30	27.32	76	0.99
160	4.16	33.37	26.50	1000	2.89	34.40	27.44	65	1.14
				1200	2.55	34.48	27.53	56	1.27
188	4.14	33.38	26.51	1500	2.22	34.55	27.62	48	1.45
207	4.19u	33.38	26.50						
208	4.12	33.40	26.53						
217	4.16	33.41	26.53						
257	4.19	33.52	26.61						
305	4.15	33.68	26.74						
309	4.20u	33.71	26.76						
407	4.04	34.00	27.01						
505	3.75	34.09	27.11						
603	3.59	34.19	27.21						
701	3.48	34.25	27.26						
799	3.27	34.30	27.32						
887	3.05	34.36	27.39						
1082	2.76	34.43	27.47						
1277	2.44	34.50	27.56						
1571	2.16	34.56	27.63						
1964	1.87	34.61	27.69						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

USS STATEN ISLAND; September 10, 1959; 1500 GCT; 65°44'N, 168°37'W; sounding, 53 m; wind, 140°, force 4; weather, overcast; sea, moderate.[a] 4

0	6.43	30.74	24.16	0	6.43	30.74	24.16	376	0.00
5	6.11	32.00	25.19	10	5.74	32.13	25.34	264	0.03
10	5.74	32.13	25.34	20	3.90	32.62	25.93	209	0.06
15	4.26	32.53	25.82	30	3.87	32.66	25.96	205	0.08
20	3.90	32.62	25.93						
25	3.84	32.61	25.93						
30	3.87	32.66	25.96						
45	3.83	32.65	25.96						

USS STATEN ISLAND; September 10, 1959; 1600 GCT; 65°41'N, 168°21'W; sounding, 53 m; wind, 160°, force 1; weather, cloudy; sea, moderate. 5

0	6.77	29.99	23.53	0	6.77	29.99	23.53	436	0.00
5	6.78	30.01	23.55	10	6.60	30.35	23.84	408	0.04
10	6.60	30.35	23.84	20	4.27	32.17	25.53	246	0.08
15	5.06	31.91	25.25	30	4.16	32.20	25.57	243	0.10
20	4.27	32.17	25.53						
25	4.18	32.19	25.56						
30	4.16	32.20	25.57						
45	4.09	32.20	25.58						

USS STATEN ISLAND; September 10, 1959; 2000 GCT; 65°00'N, 168°30'W; sounding, 46 m; wind, calm; weather, cloudy; sea, calm. 2

0	5.46	32.29	25.50	0	5.46	32.29	25.50	249	0.00
5	5.44	32.29	25.50	10	5.38	32.29	25.51	248	0.02
10	5.38	32.29	25.51	20	4.69	32.30	25.59	240	0.05
15	4.65	32.49	25.75	30	3.56	32.49	25.86	215	0.07
20	2.73u	32.97u	26.31						
25	4.72	32.30	25.59						
30	3.56	32.49	25.86						
40	2.70	32.98	26.32						

USS STATEN ISLAND; September 11, 1959; 0700 GCT; 63°00'N, 168°00'W; sounding, 27 m; wind, 180°, force 2; weather, cloudy; sea, slight. 1

0	5.62	32.11	25.34	0	5.62	32.11	25.34	264	0.00
5	5.58	32.10	25.34	10	5.28	32.17	25.43	256	0.03
10	5.28	32.17	25.43	20	2.77	32.43	25.88	213	0.05
15	3.69	32.35	25.73						
20	2.77	32.43	25.88						
25	2.24	32.50	25.98						

a) Forty-eight stations, occupied in the Beaufort and Chuckchee Seas, are not included here because they are outside the area covered by this series. These data are available at the National Oceanographic Data Center in Washington, D. C.

UW 88-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

234-001

BROWN BEAR; June 18, 1959; 0100 GCT;[a] 47°45'N, 122°25'W; sounding, 284 m; wind, missing; weather, clear; sea, calm; wire angle, 10°, 10°.

0b)	16.47	23.679	8.32	0.50	17.00	0	16.47	23.67	8.32	0.50	17.00	1064	0.00
5	13.01	25.804	8.18	0.68	19.32	10	12.22	26.94	7.97	0.82	20.34	743	0.09
10	12.22	26.942	7.97	0.82	20.34	20	10.60	28.87	5.99	1.65	22.10	573	0.16
20	10.60	28.879	5.99	1.65	22.10	30	10.27	29.17	5.58	1.80	22.39	546	0.21
30	10.27	29.172	5.58	1.80	22.39	50	9.79	29.43	5.10	1.97	22.67	520	0.32
50	9.79	29.435	5.10	1.97	22.67	75	9.88	29.65	5.01	1.98	22.83	505	0.45
75	9.88	29.650	5.01	1.98	22.83	100	9.85	29.77	4.91	2.16	22.92	496	0.57
99	9.85	29.764	4.91	2.16	22.92	150	9.98	29.96	5.01	2.27	23.05	485	0.82
148	9.98	29.964	5.01	2.24	23.05	200	9.95	30.06	5.02	2.58	23.13	478	1.06
						250	9.95	30.13	4.95	2.22	23.19	473	1.30
197c)	9.95	30.042	5.03	2.62	23.12								
236	9.95	30.123	4.96	2.25	23.18								
266	9.96	30.138	4.96	2.26	23.08								

234-002

BROWN BEAR; June 18, 1959; 0300 GCT; 47°55'N, 122°29'W; sounding, 201 m; wind, 150°, force 3; weather, clear; sea, calm; wire angle, 13°, 07°.

0b)	11.48	27.445	7.06	1.38	20.85	0	11.48	27.44	7.06	1.38	20.85	693	0.00
5	10.75	28.339	6.07	1.80	21.66	10	10.44	28.73	5.66	1.90	22.02	581	0.06
10	10.44	28.735	5.66	1.90	22.02	20	10.14	29.37	5.29	2.04	22.57	529	0.12
20	10.14	29.377	5.29	2.04	22.57	30	10.26	29.44	5.29	1.93	22.60	526	0.17
30	10.26	29.444	5.29	1.93	22.60	50	10.20	29.52	5.28	1.83	22.67	519	0.28
50	10.20	29.523	5.28	1.83	22.67	75	10.08	29.71	5.10	2.06	22.84	504	0.41
74	10.08	29.718	5.10	2.06	22.84	100	10.05	29.75	5.11	2.11	22.88	501	0.53
99	10.05	29.757	5.11	2.10	22.88	150	10.08	29.90	5.12	2.10	22.99	491	0.78
127c)	10.02	29.803	5.07	2.23	22.92								
156	10.09	29.924	5.12	2.09	23.00								
185	10.08	30.009	5.08	2.14	23.07								

234-003

BROWN BEAR; June 18, 1959; 0600 GCT; 48°08'N, 122°41'W; sounding, 104 m; wind, missing; weather, partly cloudy; sea, calm; wire angle, 14°.

0	10.60	29.898	5.45	1.88	22.90	0	10.60	29.89	5.45	1.88	22.90	497	0.00
5	10.34	30.007	5.43	1.96	23.02	10	10.29	30.04	5.39	1.80	23.06	482	0.05
10	10.29	30.049	5.39	1.80	23.06	20	10.25	30.11	5.35	1.87	23.12	476	0.10
20	10.25	30.112	5.35	1.87	23.12	30	10.08	30.32	5.25	1.99	23.32	458	0.14
30	10.08	30.326	5.25	1.99	23.32	50	9.88	30.65	5.03	1.94	23.60	430	0.23
48	9.89	30.634	5.04	1.93	23.59	75	9.81	30.78	4.94	2.09	23.72	420	0.34
72	9.82	30.775	4.95	2.07	23.71								
97	9.73	30.812	4.89	2.18	23.75								

234-004

BROWN BEAR; June 18, 1959; 1300 GCT; 48°51'N, 122°59'W; sounding, 219 m; wind, 020°, force 3; weather, partly cloudy; sea, calm; wire angle, 01°, 00°.

0b)	13.31	23.359	6.52		17.38	0	13.31	23.35	6.52		17.38	1028	0.00
5	11.78	26.339	6.00		19.94	10	11.34	27.23	6.04		20.71	707	0.09
10	11.34	27.234	6.04		20.71	20	10.52	28.60	5.16		21.91	592	0.15
20	10.52	28.601	5.16		21.91	30	9.66	29.03	4.94		22.38	547	0.21
30	9.66	29.031	4.94		22.38	50	9.28	29.56	4.79		22.85	502	0.31
50	9.28	29.567	4.79		22.85	75	9.20	29.92	4.70		23.14	475	0.44
75	9.20	29.926	4.70		23.14	100	9.16	30.39	4.58		23.51	440	0.55
100	9.16	30.394	4.58		23.51	150	9.05	30.76	4.44		23.82	411	0.76
						200	8.99	30.97	4.33		23.99	396	0.96
150c)	9.05	30.767	4.44		23.82								
200	8.99	30.971	4.33		23.99								

a) Times reported are those of the messenger release of the shallow cast to the nearest hour (when half way between, to the nearest even hour). Wire angles are given in the numerical order of casts.
b) Second cast.
c) First cast.

UW BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ cl/ton	ΔD dyn m
234-005 BROWN BEAR; June 18, 1959; 1400 GCT; 48°45'N, 123°04'W; sounding, 201 m; wind, 020°, force 3; weather, partly cloudy; sea, calm; wire angle, 50°, 50°, 12°.													
0a)	13.34	22.869	6.44		17.00	0	13.34	22.86	6.44		17.00	1064	0.00
5	11.83	25.946	5.96		19.63	10	10.89	27.76	5.43		21.20	660	0.09
10	10.89	27.762	5.43		21.20	20	10.04	29.06	4.97		22.34	551	0.15
20	10.04	29.063	4.97		22.34	30	9.77	29.34	4.92		22.60	526	0.20
29	9.78	29.336	4.91		22.59	50	9.54	29.72	4.91		22.93	494	0.30
49	9.56	29.663	4.92		22.88	75	9.29	30.15	4.66		23.31	459	0.42
73	9.30	30.220	4.67		23.36	100	9.26	30.07	4.65		23.25	465	0.54
80b)	9.27	30.037	4.64		23.22								
106	9.21	30.245	4.60		23.39								
120c)	9.03	30.940	4.38		23.96								
234-006 BROWN BEAR; June 18, 1959; 1500 GCT; 48°42'N, 123°15'W; sounding, 315 m; wind, 270°, force 1; weather, partly cloudy; sea, calm; wire angle, 58°, 12°.													
0d)	11.95	26.511	6.01		20.05	0	11.95	26.51	6.01		20.05	770	0.00
5	11.64	26.584	5.99		20.16	10	11.47	26.84	5.89		20.39	738	0.08
10	11.47	26.842	5.89		20.39	20	11.95	27.34	5.76		20.69	709	0.15
20	11.95	27.348	5.76		20.69	30	11.38	28.12	5.46		21.39	642	0.22
29	11.49	28.060	5.48		21.33	50	9.88	29.14	5.13		22.43	543	0.33
49	9.91	29.081	5.15		22.38	75	9.46	30.07	4.78		23.22	468	0.46
73	9.46	30.078	4.78		23.22	100	9.33	30.37	4.65		23.47	444	0.57
98	9.37	30.308	4.67		23.41	150	9.42	30.23	4.74		23.35	456	0.80
127b)	9.04	31.079	4.39		24.06								
137	9.05	31.204	4.31		24.16								
147d)	9.38	30.354	4.69		23.45								
172b)	8.96	31.319	4.25		24.26								
234-007 BROWN BEAR; June 18, 1959; 1700 GCT; 48°35'N, 123°13'W; sounding, 239 m; wind, 300°, force 1; weather, clear; sea, calm; wire angle, 39°, 30°.													
0c)	10.02	29.098	5.30		22.37	0	10.02	29.09	5.30		22.37	548	0.00
4	10.02	29.207	5.21		22.45	10	9.91	29.31	5.24		22.56	530	0.05
9	9.92	29.278	5.24		22.52	20	9.83	29.54	5.18		22.75	512	0.11
17	9.85	29.517	5.20		22.75	30	9.76	29.71	5.10		22.89	498	0.16
26	9.78	29.629	5.13		22.82	50	9.60	30.12	4.93		23.24	466	0.25
43	9.67	30.016	5.00		23.14	75	9.24	30.89	4.53		23.89	403	0.36
65	9.42	30.489	4.74		23.54	100	8.93	31.60	4.17		24.49	346	0.46
87	9.07	31.291	4.33		24.23								
144b)	8.78	31.737	4.05		24.62								
234-008 BROWN BEAR; June 18, 1959; 1800 GCT; 48°31'N, 123°10'W; sounding, 268 m; wind, 010°, force 3; weather, missing; sea, calm; wire angle, 55°, 20°.													
0d)	9.94	29.360	4.57		22.59	0	9.94	29.36	4.57		22.59	526	0.00
5	9.92	29.389	5.16		22.61	10	9.60	29.97	4.90		23.12	476	0.05
9	9.62	29.920	4.92		23.08	20	9.41	30.40	4.72		23.48	442	0.10
19	9.43	30.364	4.74		23.45	30	9.25	30.73	4.57		23.77	415	0.14
28	9.28	30.669	4.60		23.71	50	9.05	31.21	4.36		24.17	376	0.22
47	9.06	31.174	4.37		24.14	75	8.96	31.44	4.28		24.36	358	0.31
71	8.98	31.450	4.27		24.37	100	8.77	31.84	4.02		24.70	326	0.40
						150	8.53	32.07	3.83		24.92	307	0.55
86b)	8.89	31.575	4.20		24.48								
94d)	8.82	31.792	4.05		24.66								
115b)	8.67	31.944	3.94		24.80								
157	8.52	32.082	3.82		24.93								

a) Third cast.
b) First cast.
c) Second cast.
d) Overlapping second cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; June 18, 1959; 1900 GCT; 48°26'N, 123°03'W; sounding, 193 m; wind, 290°, force 4; weather, missing; sea, calm; wire angle, 22°. 234-009

0	9.75	30.029	4.95	23.13	0	9.75	30.02	4.95	23.13	474	0.00
5	9.62	30.213	4.87	23.30	10	9.33	30.76	4.72	23.78	413	0.04
9	9.34	30.731	4.72	23.75	20	9.28	30.95	4.68	23.93	399	0.08
19	9.27	30.941	4.69	23.93	30	9.29	31.01	4.62	23.98	395	0.12
28	9.30	31.010	4.63	23.98	50	9.24	31.05	4.58	24.02	391	0.20
46	9.25	31.035	4.57	24.00	75	9.15	31.27	4.50	24.20	374	0.30
70	9.18	31.209	4.56	24.14	100		31.55	4.29			
93	9.03	31.507	4.33	24.40	150		31.93	3.98			
130	8.79	31.786	4.10	24.65							
167	-	32.057	3.88								

BROWN BEAR; June 18, 1959; 2000 GCT; 48°18'N, 122°56'W; sounding, 168 m; wind, 320°, force 3; weather, missing; sea, calm; wire angle, 09°, 16°. 234-010

0	11.12	29.813	6.19	22.75	0	11.12	29.81	6.19	22.75	512	0.00
5	10.75	29.829	6.18	22.82	10	10.25	30.15	5.58	23.16	473	0.05
10	10.25	30.154	5.58	23.16	20	10.09	30.35	5.50	23.34	456	0.10
20	10.09	30.356	5.50	23.34	30	10.08	30.47	5.48	23.43	447	0.14
30	10.08	30.478	5.48	23.43	50	9.75	30.73	5.10	23.69	423	0.23
49	9.77	30.715	5.12	23.67	75	9.22	31.30	4.55	24.21	373	0.33
75	9.22	31.303	4.55	24.21	100		31.95	3.93			
99	8.74	31.913	3.96	24.76	150		32.89	3.12			
125	8.04	32.740	3.38	25.52							
154	-	32.857	3.11								

BROWN BEAR; June 18, 1959; 2100 GCT; 48°16'N, 123°03'W; sounding, 166 m; wind, 340°, force 2; weather, missing; sea, calm; wire angle, 04°. 234-011

0	11.64	29.867	6.14	22.69	0	11.64	29.86	6.14	22.69	517	0.00
5	10.35	30.186	5.77	23.16	10	10.20	30.34	5.54	23.31	458	0.05
10	10.20	30.343	5.54	23.31	20	8.80	31.86	4.03	24.72	324	0.09
20	8.80	31.862	4.03	24.72	30	8.69	31.98	3.89	24.83	314	0.12
30	8.69	31.983	3.89	24.83	50	8.58	32.12	3.76	24.95	302	0.18
50	8.58	32.129	3.76	24.95	75	8.14	32.65	3.34	25.43	257	0.25
75	8.14	32.657	3.34	25.43	100	7.95	32.85	3.14	25.62	240	0.31
100	7.95	32.852	3.14	25.62	150	7.84	32.97	3.06	25.73	230	0.43
130	7.85	32.950	3.05	25.71							
160	7.86	32.966	3.09	25.72							

BROWN BEAR; June 18, 1959; 2300 GCT; 48°14'N, 123°12'W; sounding, 150 m; wind, missing; weather, missing; sea, calm; wire angle, 11°. 234-012

0	12.12	30.429	6.14	23.04	0	12.12	30.42	6.14	23.04	484	0.00
5	10.55	30.468	6.19	23.35	10	10.32	30.50	5.82	23.42	448	0.05
10	10.32	30.504	5.82	23.42	20	9.72	30.86	4.95	23.79	412	0.09
20	9.72	30.867	4.95	23.79	30	9.22	31.42	4.43	24.31	363	0.13
29	9.26	31.389	4.47	24.27	50	8.73	32.00	3.90	24.84	313	0.20
49	8.73	32.007	3.90	24.84	75	8.64	32.12	3.83	24.94	303	0.27
74	8.64	32.122	3.82	24.94	100	8.45	32.32	3.68	25.13	286	0.35
98	8.48	32.290	3.71	25.10							
128	7.65	33.139	2.89	25.88							

BROWN BEAR; June 19, 1959; 0100 GCT; 48°12'N, 123°24'W; sounding, 139 m; wind, 110°, force 1; weather, haze; sea, calm; wire angle, 00°. 234-013

0	10.73	31.274	6.10	23.94	0	10.73	31.27	6.10	23.94	397	0.00
5	10.18	31.432	5.67	24.16	10	9.90	31.53	5.34	24.29	365	0.04
10	9.90	31.531	5.34	24.29	20	8.50	32.29	3.74	25.10	288	0.07
20	8.50	32.298	3.74	25.10	30	8.34	32.40	3.62	25.21	278	0.10
30	8.34	32.406	3.62	25.21	50	7.39	33.45	2.61	26.17	186	0.14
50	7.39	33.455	2.61	26.17	75	7.24	33.60	2.49	26.31	174	0.19
75	7.24	33.606	2.49	26.31	100	7.23	33.61	2.44	26.31	173	0.23
100	7.23	33.615	2.44	26.31							
125	7.18	33.650	2.42	26.35							

UW BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
234-014	BROWN BEAR; June 19, 1959; 0200 GCT; 48°15'N, 123°33'W; sounding, 173 m; wind, 190°, force 2; weather, haze; sea, smooth; wire angle, 14°.												
0	10.20	30.832	5.52		23.69	0	10.20	30.83	5.52		23.69	421	0.00
5	10.16	30.824	5.56		23.69	10	10.10	30.80	5.52		23.69	422	0.04
10	10.10	30.807	5.52		23.69	20	10.01	30.79	5.56		23.69	422	0.08
19	10.01	30.796	5.56		23.69	30	9.98	30.82	5.51		23.72	419	0.13
29	9.98	30.824	5.52		23.72	50	9.72	31.02	5.17		23.92	401	0.21
48	9.75	30.983	5.20		23.88	75	8.76	32.01	4.13		24.84	313	0.30
72	9.01	31.772	4.41		24.61	100	7.36	33.40	2.58		26.13	191	0.36
97	7.43	33.331	2.64		26.07	150	6.89	33.83	2.18		26.53	153	0.45
126	6.95	33.802	2.22		26.50								
155	6.92	33.804	2.21		26.51								
234-015	BROWN BEAR; June 19, 1959; 0300 GCT; 48°16'N, 122°41'W; sounding, 184 m; wind, 070°, force 1; weather, haze; sea, smooth; wire angle, 10°.												
0	10.11	30.912	5.60		23.77	0	10.11	30.91	5.60		23.77	414	0.00
5	9.73	31.069	5.16		23.95	10	9.61	31.19	5.04		24.07	386	0.04
10	9.61	31.199	5.04		24.07	20	9.18	31.63	4.59		24.48	347	0.08
20	9.18	31.635	4.59		24.48	30	9.09	31.69	4.50		24.54	341	0.11
30	9.09	31.694	4.50		24.54	50	8.80	31.97	4.14		24.80	316	0.18
49	8.88	31.895	4.23		24.73	75	7.36	33.40	2.54		26.13	190	0.24
74	7.38	33.383	2.56		26.11	100	6.94	33.79	2.15		26.50	156	0.28
98	6.94	33.792	2.15		26.50	150	6.89	33.83	2.14		26.53	153	0.36
138	6.90	33.835	2.14		26.53								
177	6.89	33.837	2.14		26.53								
234-016	BROWN BEAR; June 19, 1959; 0500 GCT; 48°19'N, 124°05'W; sounding, 188 m; wind, 260°, force 2; weather, partly cloudy; sea, calm; wire angle, 00°.												
0	11.72	30.957	7.68		23.52	0	11.72	30.95	7.68		23.52	438	0.00
5	10.25	31.095	5.92		23.89	10	9.75	31.28	5.22		24.12	381	0.04
10	9.75	31.280	5.22		24.12	20	9.69	31.30	5.12		24.14	379	0.08
20	9.69	31.301	5.12		24.14	30	9.56	31.33	4.93		24.18	375	0.12
30	9.56	31.331	4.93		24.18	50	8.97	31.83	4.28		24.67	329	0.19
50	8.97	31.835	4.28		24.67	75	8.29	32.62	3.42		25.39	261	0.26
75	8.29	32.626	3.42		25.39	100	6.94	33.80	2.06		26.50	155	0.31
100	6.94	33.809	2.06		26.50	150	6.80	33.89	2.03		26.59	147	0.39
140	6.81	33.886	2.03		26.58								
180	6.81	33.890	2.07		26.59								
234-017	BROWN BEAR; June 19, 1959; 0900 GCT; 48°23'N, 124°24'W; sounding, 237 m; wind, 250°, force 2; weather, partly cloudy; sea, slight; wire angle, 03°.												
0	13.27	29.860	8.46		22.39	0	13.27	29.86	8.46		22.39	546	0.00
5	12.40	30.171	8.02		22.80	10	11.50	30.49	6.76		23.21	468	0.05
10	11.50	30.494	6.76		23.21	20	9.24	31.65	4.46		24.48	346	0.09
20	9.24	31.659	4.46		24.48	30	8.95	31.93	4.19		24.75	321	0.12
30	8.95	31.930	4.19		24.75	50	8.13	32.70	3.24		25.47	252	0.18
50	8.13	32.706	3.24		25.47	75	7.35	33.49	2.54		26.20	183	0.24
75	7.35	33.499	2.54		26.20	100	7.12	33.69	2.28		26.39	166	0.28
100	7.12	33.694	2.28		26.39	150	6.87	33.84	2.01		26.54	152	0.36
140	6.91	33.823	2.04		26.52								
180	6.81	33.870	1.98		26.58								

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; June 19, 1959; 1300 GCT; 48°29'N, 124°45'W; sounding, 246 m; wind, 290°, force 2; weather, overcast; sea, slight; wire angle, 18°, 00°. 234-018

0a)	13.13	29.425	8.02	22.08	0	13.13	29.42	8.02	22.08	575	0.00
5	12.01	30.146	7.69	22.84	10	12.39	30.95	9.23	23.40	449	0.05
10	12.39	30.958	9.23	23.40	20	9.39	31.61	4.74	24.43	351	0.09
20	9.39	31.619	4.74	24.43	30	8.74	32.33	3.89	25.09	288	0.12
30	8.74	32.336	3.89	25.09	50	8.14	32.84	3.06	25.58	242	0.18
50	8.14	32.844	3.06	25.58	75	7.78	33.08	3.62	25.82	220	0.23
75	7.78	33.083	3.62	25.82	100	7.14	33.75	2.35	26.44	162	0.28
100	7.14	33.753	2.35	26.44	150	6.90	33.85	1.97	26.55	152	0.36
					200	6.53	33.93	1.89	26.66	142	0.43
143b)	6.87	33.836	1.98	26.54							
190	6.68	33.923	1.90	26.63							
238	5.57	33.946	1.86	26.79							

BROWN BEAR; June 19, 1959; 1600 GCT; 48°32'N, 125°15'W; sounding, 110 m; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 00°. 234-019

0	14.43	29.054	6.72	21.54	0	14.43	29.05	6.72	21.54	627	0.00
5	14.28	29.230	6.76	21.71	10	12.58	30.89	6.84	23.32	457	0.05
10	12.58	30.890	6.84	23.32	20	9.51	31.63	4.76	24.43	352	0.09
20	9.51	31.637	4.76	24.43	30	8.50	32.33	3.66	25.13	285	0.13
30	8.50	32.330	3.66	25.13	50	8.25	32.61	3.34	25.38	261	0.18
50	8.25	32.610	3.34	25.38	75	7.30	33.53	2.41	26.24	180	0.24
75	7.30	33.535	2.41	26.24	100	6.95	33.77	1.92	26.48	158	0.28
100	6.95	33.775	1.92	26.48							

BROWN BEAR; June 19, 1959; 1900 GCT; 48°29'N, 125°43'W; sounding, 96 m; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 09°. 234-020

0	14.93	29.460	6.84	21.75	0	14.93	29.46	6.84	21.75	607	0.00
5	14.69	29.459	6.96	21.79	10	11.46	30.83	7.32	23.48	442	0.05
10	11.46	30.832	7.32	23.48	20	9.40	31.67	4.68	24.47	347	0.09
20	9.40	31.679	4.68	24.47	30	8.95	31.95	4.22	24.76	320	0.12
30	8.95	31.954	4.22	24.76	50	7.97	32.99	3.08	25.72	229	0.18
49	8.01	32.965	3.12	25.69	75	7.43	33.45	2.45	26.16	187	0.23
74	7.44	33.444	2.46	26.15							
89	7.42	33.456	2.46	26.16							

BROWN BEAR; June 20, 1959; 0000 GCT; 48°31'N, 126°13'W; sounding, 466 m; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 07°, 20°. 234-021

0	14.49	32.139	6.04	23.89	0	14.49	32.13	6.04	23.89	402	0.00
5	14.48	32.140	6.09	23.90	10	13.16	32.12	6.28	24.16	377	0.04
10	13.16	32.126	6.28	24.16	20	12.08	32.15	6.45	24.39	356	0.08
20	12.08	32.151	6.45	24.39	30	10.32	32.29	6.67	24.81	316	0.11
27	10.72	32.231	6.71	24.69	50	8.35	32.55	6.41	25.32	267	0.17
50	8.35	32.551	6.41	25.32	75	7.50	32.67	6.08	25.54	246	0.23
74	7.50	32.638	6.18	25.51	100	7.53	33.35	4.20	26.07	197	0.29
99	7.53	33.345	4.24	26.06	150	6.99	33.75	3.68	26.46	160	0.38
124	7.38	33.638	3.58	26.31	200	6.47	33.93	2.88	26.67	141	0.45
149	-	33.747	3.72		250	6.23	33.99	1.93	26.75	134	0.52
					300	6.15	33.99	1.79	26.76	134	0.59
164	6.81	33.880	3.25	26.58	400	5.30	34.09	0.94	26.94	117	0.71
191	6.54	33.910	3.19	26.64							
238	6.24	33.994	1.99	26.75							
286	6.16	33.996	1.79	26.76							
332	6.01	34.014	1.65	26.79							
379	5.52	34.065	1.13	26.89							
427	5.02	34.135	0.74	27.01							

a) Second cast.
b) First cast.

UW

BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
234-022	BROWN BEAR; June 20, 1959; 0500 GCT; 48°31'N, 126°48'W; sounding, 1938 m; wind, 230°, force 2; weather, overcast; sea, smooth; wire angle, 10°, 10°, 10°, 00°.												
0	13.90	32.188	4.38		24.05	0	13.90	32.18	4.38		24.05	387	0.00
10	12.51	32.298	6.55		24.41	10	12.51	32.29	6.55		24.41	353	0.04
20	11.45	32.325	6.55		24.63	20	11.45	32.32	6.55		24.63	332	0.07
30	10.08	32.460	5.33		24.98	30	10.08	32.46	5.33		24.98	299	0.10
49	8.70	32.554	6.45		25.27	50	8.65	32.54	6.38		25.27	272	0.16
						75	7.71	32.62	4.97		25.47	253	0.23
75	7.71	32.621	4.97		25.47	100	7.35	33.07	4.05		25.87	215	0.28
90	7.38	32.959	4.55		25.78	150	7.18	33.68	3.39		26.38	168	0.38
						200	6.73	33.93	2.45		26.63	144	0.46
100	7.35	33.070	4.05		25.87	250	6.32	33.96	2.27		26.71	137	0.53
110	7.29	33.282	3.15		26.05	300	5.92	34.00	1.67		26.79	130	0.60
120	7.35	33.439	3.83		26.16	400	5.29	34.07	1.03		26.93	118	0.72
130	7.51	33.552	3.74		26.23	500	4.78	34.14	0.65		27.04	108	0.83
140	7.47	33.687	2.99		26.34	600	4.45	34.20	0.46		27.12	101	0.94
150	7.18	33.687	3.39		26.38	700	4.17	34.26	0.36		27.20	94	1.03
159	7.09	33.756	3.24		26.44	800	3.91	34.31	0.30		27.27	88	1.12
175	6.90	33.795	3.21		26.50	1000	3.40	34.40	0.33		27.39	77	1.29
						1200	3.00	34.46	0.46		27.48	70	1.44
187	6.85	33.917	2.49		26.60	1500	2.44	34.54	0.82		27.59	59	1.63
213	6.61	33.951	2.40		26.67								
266	6.20	33.972	2.15		26.74								
320	5.77	34.024	1.43		26.83								
532	4.64	34.162	0.56		27.07								
795	3.92	34.315	0.30		27.27								
1054	3.28	34.428	0.36		27.42								
1361	2.70	34.505	0.63		27.53								
1664	2.15	34.580	1.09		27.65								
234-023	BROWN BEAR; June 20, 1959; 1700 GCT; 48°30'N, 128°11'W; sounding, 2560 m; wind, 250°, force 3; weather, fog; sea, slight; wire angle, 10°, 09°, 12°.												
0	13.45	32.277	6.15		24.21	0	13.45	32.27	6.15		24.21	372	0.00
10	12.56	32.353	6.37		24.45	10	12.56	32.35	6.37		24.45	349	0.04
20	11.44	32.413	6.54		24.70	20	11.44	32.41	6.54		24.70	325	0.07
30	10.20	32.489	6.72		24.97	30	10.20	32.48	6.72		24.97	300	0.10
49	8.32	32.550	6.63		25.33	50	8.28	32.54	6.66		25.33	266	0.16
						75	7.79	32.65	6.23		25.48	252	0.22
75a)	7.79	32.656	6.23		25.48	100	8.00	33.35	4.03		26.00	203	0.28
90	7.94	33.086	4.77		25.80	150	7.73	33.77	2.90		26.37	169	0.37
100	8.00	33.352	4.03		26.00	200	7.39	33.90	2.44		26.52	155	0.45
111	8.02	33.501	3.58		26.12	250	6.99	33.96	2.29		26.62	146	0.53
121	7.98	33.600	3.33		26.20	300	6.49	33.98	2.08		26.71	139	0.60
130	7.92	33.668	3.18		26.26	400	5.65	34.03	1.39		26.85	126	0.73
140	7.80	33.722	3.10		26.32	500	4.99	34.09	0.87		26.98	114	0.85
150	7.73	33.773	2.90		26.37	600	4.58	34.15	0.59		27.07	106	0.96
160	7.76	33.806	2.73		26.39	700	4.23	34.22	0.40		27.16	98	1.06
						800	3.96	34.28	0.31		27.24	91	1.16
176b)	7.64	33.837	2.62		26.43	1000	3.51	34.39	0.31		27.37	79	1.33
						1200	3.04	34.44	0.42		27.46	71	1.48
176a)	7.58	33.845	2.58		26.45	1500	2.49	34.52	0.72		27.57	61	1.68
201b)	7.38	33.905	2.43		26.52								
253	6.96	33.960	2.28		26.63								
303	6.46	33.985	2.07		26.71								
505	4.96	34.092	0.85		26.98								
756	4.06	34.259	0.33		27.21								
1004	3.50	34.394	0.31		27.37								
1301	2.83	34.477	0.50		27.50								
1595	2.35	34.545	0.85		27.60								

a) Second cast.

b) Overlapping third cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; June 21, 1959; 0600 GCT; 48°31'N, 130°05'W; sounding, 2652 m; wind, 250°, force 3; weather, cloudy; sea, slight; wire angle, 05°, 03°, 14°, 15°.

0	12.65	32.605	6.66	24.63	0	12.65	32.60	6.66	24.63	332	0.00
10	12.43	32.605	6.66	24.67	10	12.43	32.60	6.66	24.67	329	0.03
20	11.46	32.600	6.60	24.85	20	11.46	32.60	6.60	24.85	312	0.06
30	10.85	32.606	6.54	24.96	30	10.85	32.60	6.54	24.96	301	0.10
50	9.84	32.606	6.34	25.13	50	9.84	32.60	6.34	25.13	285	0.16
					75	8.22	32.61	6.28	25.39	261	0.22
75a)	8.22	32.618	6.28	25.39	100	7.60	32.62	6.56	25.49	252	0.29
90	7.72	32.621	6.60	25.47	150	6.89	33.49	4.71	26.27	178	0.40
100	7.60	32.625	6.56	25.49	200	6.35	33.83	3.54	26.61	147	0.48
110	7.30	32.677	6.35	25.57	250	6.01	33.91	2.97	26.71	137	0.55
120	7.28	32.810	6.00	25.68	300	5.69	33.95	2.56	26.78	131	0.61
131	7.15	33.181	5.35	25.99	400	4.93	34.01	1.57	26.92	118	0.74
141	7.00	33.389	4.91	26.17	500	4.38	34.08	0.92	27.04	108	0.85
151	6.88	33.501	4.69	26.28	600	4.07	34.16	0.67	27.13	99	0.96
161	6.80	33.621	4.49	26.38	700	3.81	34.22	0.48	27.21	93	1.05
					800	3.61	34.28	0.39	27.28	87	1.14
169b)	6.66	33.703	4.21	26.46	1000	3.25	34.38	0.33	27.39	77	1.31
					1200	2.91	34.46	0.40	27.48	68	1.45
176a)	6.64	33.748	4.08	26.50	1500	2.42	34.53	0.75	27.58	59	1.64
193b)	6.41	33.825	3.65	26.59							
242	6.05	33.908	3.02	26.70							
290	5.78	33.942	2.68	26.76							
484	4.43	34.078	0.97	27.02							
730	3.74	34.244	0.44	27.23							
976	3.29	34.378	0.33	27.38							
1271	2.79	34.481	0.46	27.51							
1587c)	2.28	34.546	0.90	27.60							

a) Second cast.
b) Overlapping third cast.
c) Fourth cast.

UW

BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

234-025 BROWN BEAR; June 21, 1959; 2000 GCT; 48°31'N, 132°04'W; sounding, 3109 m; wind, 290°, force 3; weather, overcast; sea, slight; wire angle, 05°, 06°, 22°, 12°, 10°.

0	12.03	32.638	6.18	1.00	24.77	0	12.03	32.63	6.18	1.00	24.77	319	0.00
10	12.01	32.637	6.24	1.04	24.77	10	12.01	32.63	6.24	1.04	24.77	319	0.03
20	10.92	32.649	6.42	0.95	24.98	20	10.92	32.64	6.42	0.95	24.98	300	0.06
30	10.39	32.632	6.50	0.92	25.06	30	10.39	32.63	6.50	0.92	25.06	292	0.09
50	9.82	32.658	6.60	0.95	25.17	50	9.82	32.65	6.60	0.95	25.17	281	0.15
						75	8.86	32.67	6.60	1.12	25.34	266	0.22
75a)	8.86	32.675	6.60	1.12	25.34	100	7.69	32.78	6.23	1.38	25.60	241	0.28
90	7.97	32.720	6.38	1.28	25.51	150	6.98	33.63	4.70	2.02	26.36	169	0.38
100	7.69	32.782	6.23	1.38	25.60	200	6.47	33.84	4.33	2.23	26.60	148	0.46
109	7.62	32.999	5.79	1.58	25.77	250	5.87	33.88	3.64	2.28	26.71	138	0.53
119	7.38	33.288	5.31	1.85	26.03	300	5.36	33.92	2.69	2.97	26.80	129	0.60
130	7.05	33.442	4.85	2.00	26.21	400	4.46	34.01	1.72	3.22	26.97	113	0.72
140	6.93	33.577	4.63	2.13	26.32	500	4.38	34.09	1.08	3.29	27.05	107	0.83
150	6.98	33.638	4.70	2.02	26.36	600	4.23	34.17	0.73	3.39	27.12	100	0.94
160	6.92	33.705	4.92	2.02	26.43	700	3.95	34.24	0.48	3.45	27.21	93	1.03
						800	3.71	34.29	0.34	3.42	27.27	87	1.12
174b)	6.73	33.786	4.76	1.93	26.52	1000	3.36	34.36	0.31	3.19	27.36	80	1.29
						1200	3.01	34.42	0.33	3.05	27.44	73	1.44
175a)	6.76	33.770	4.80	1.93	26.50	1500	2.50	34.49	0.47	3.01	27.54	63	1.65
191b)	6.50	33.831	4.56	2.11	26.59								
240	6.06	33.877	3.67	2.39	26.67								
260c)	5.70	33.893	3.56	2.24	26.74								
313	5.26	33.934	2.45	3.16	26.82								
507d)	4.41	34.106	1.04	3.29	27.05								
521c)	4.48	-	-	-									
789	3.73	34.295	0.34	3.44	27.27								
1038	3.29	34.379	0.31	3.16	27.38								
1618d)	2.31	34.518	0.56	3.05	27.58								

a) Second cast.
b) Overlapping third cast.
c) Fourth cast.
d) Overlapping sixth cast; no data obtained on fifth cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

234-026

BROWN BEAR; June 22, 1959; 0800 GCT; 47°41'N, 132°00'W; sounding, 3200 m; wind, 220°, force 3; weather, missing; sea, slight; wire angle, 11°, 05°, 06°, 10°, 15°, 11°.

0	12.79	32.607	6.16	0.98	24.60	0	12.79	32.60	6.16	0.98	24.60	335	0.00
10	12.52	32.602	6.17	1.04	24.65	10	12.52	32.60	6.17	1.04	24.65	330	0.03
20	11.00	32.628	6.45	0.80	24.95	20	11.00	32.62	6.45	0.80	24.95	302	0.06
29	10.79	32.614	6.43	1.07	24.97	30	10.71	32.61	6.45	1.07	24.99	298	0.10
49	9.48	32.633	6.74	1.13	25.21	50	9.45	32.63	6.75	1.12	25.21	277	0.15
						75	8.52	32.63	6.70	1.11	25.36	264	0.22
75	8.52	32.630	6.70	1.11	25.36	100	7.60	32.88	5.90	1.64	25.69	232	0.28
90	7.78	32.722	6.33	1.40	25.54	150	6.87	33.60	3.12	2.67	26.36	170	0.38
100	7.60	32.880	5.90	1.64	25.69	200	6.79	33.91	2.33	2.79	26.61	146	0.46
						250	6.19	33.95	2.26	2.85	26.72	136	0.53
109	7.16	33.171	5.11	2.06	25.98	300	5.86	33.99	1.85	3.09	26.79	130	0.60
119	7.02	33.360	4.68	2.20	26.15	400	5.21	34.01	1.41	3.24	26.89	122	0.73
129	6.93	33.512	4.30	-	26.28	500	4.67	34.06	1.04	3.38	26.99	113	0.84
139	6.89	33.618	4.02	2.45	26.36	600	4.30	34.14	0.73	3.51	27.09	103	0.95
149	6.86	33.751	3.16	2.68	26.29	700	3.99	34.21	0.50	3.60	27.18	96	1.05
159	6.93	33.807	2.84	2.65	26.51	800	3.74	34.28	0.38	3.62	27.26	88	1.14
174	6.84	33.870	2.63	2.75	26.57	1000	3.33	34.38	0.33	3.58	27.38	78	1.31
						1200	2.93	34.44	0.45	3.59	27.47	70	1.46
176	6.88	33.848	2.73	2.61	26.54	1500	2.42	34.52	0.73	3.55	27.57	60	1.65
201	6.78	33.916	2.32	2.79	26.61								
252	6.17	33.952	2.25	2.86	26.72								
303	5.84	33.991	1.83	3.10	26.80								
504	4.65	34.060	1.03	3.38	26.99								
753	3.84	34.253	0.41	3.63	27.23								
1004	3.32	34.387	0.33	3.58	27.38								
1305	2.74	34.474	0.53	3.58	27.51								
1604	2.26	34.546	0.86	3.53	27.60								

234-027

BROWN BEAR; June 23, 1959; 0300 GCT; 47°40'N, 130°05'W; sounding, 2780 m; wind, 170°, force 3; weather, intermittent slight drizzle; sea, slight; wire angle, 00°, 00°, 08°.

0	13.47	32.617	6.08	0.93	24.47	0	13.47	32.61	6.08	0.93	24.47	347	0.00
10	12.87	32.614	6.23	0.98	24.59	10	12.87	32.61	6.23	0.98	24.59	336	0.03
20	11.72	32.613	6.45	0.90	24.81	20	11.72	32.61	6.45	0.90	24.81	315	0.07
30	11.43	32.611	6.46	0.89	24.86	30	11.43	32.61	6.46	0.89	24.86	310	0.10
50	9.26	32.625	6.71	0.98	25.24	50	9.26	32.62	6.71	0.98	25.24	275	0.16
						75	8.58	32.64	6.56	1.11	25.36	264	0.22
75	8.58	32.642	6.56	1.11	25.36	100	8.11	32.75	6.13	1.39	25.51	249	0.29
90	8.12	32.669	6.43	1.30	25.44	150	7.03	33.56	4.88	2.02	26.30	175	0.39
100	8.11	32.753	6.13	1.39	25.51	200	6.53	33.82	4.46	2.22	26.57	150	0.48
110	7.71	32.986	5.59	1.68	25.75	250	5.99	33.88	3.61	2.52	26.69	139	0.55
120	7.44	33.204	5.26	1.88	25.96	300	5.55	33.91	2.88	2.68	26.77	132	0.62
130	7.17	33.414	5.04	1.96	26.17	400	4.95	33.98	1.77	3.05	26.89	121	0.74
140	7.09	33.494	5.00	2.00	26.24	500	4.48	34.05	0.98	3.32	27.00	111	0.86
150	7.03	33.561	4.88	2.02	26.30	600	4.23	34.14	0.65	3.43	27.10	103	0.96
160	7.00	33.610	4.86	2.06	26.35	700	3.98	34.22	0.43	3.52	27.19	95	1.06
175	6.78	33.727	4.69	2.11	26.46	800	3.75	34.28	0.36	3.57	27.26	88	1.16
						1000	3.32	34.39	0.38	3.63	27.39	77	1.32
175a)	6.80	33.722	4.75	2.08	26.46	1200	2.95	34.44	0.45	3.69	27.46	70	1.47
200	6.53	33.820	4.46	2.22	26.57	1500	2.45	34.52	0.74	3.60	27.57	60	1.66
250	5.99	33.887	3.61	2.52	26.69								
299	5.56	33.914	2.89	2.68	26.77								
499	4.48	34.058	0.98	3.32	27.00								
749	3.87	34.258	0.36	3.55	27.23								
999	3.32	34.394	0.38	3.63	27.39								
1299	2.78	34.478	0.52	3.68	27.50								
1599	2.30	34.545	0.88	3.53	27.60								

a) Overlapping cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
234-028	BROWN BEAR; June 23, 1959; 1500 GCT; 47°40'N, 128°07'W; sounding, 2633 m; wind, 080°, force 3; weather, cloudy; sea, slight; wire angle, 03°, 08°, 15°.												
0	13.96	32.343	6.01	0.78	24.16	0	13.96	32.34	6.01	0.78	24.16	376	0.00
10	13.96	32.343	6.04	0.80	24.16	10	13.96	32.34	6.04	0.80	24.16	377	0.04
20	12.32	32.323	6.34	0.81	24.47	20	12.32	32.32	6.34	0.81	24.47	347	0.07
30	12.04	32.328	6.38	0.78	24.52	30	12.04	32.32	6.38	0.78	24.52	343	0.11
50	9.77	32.423	6.76	0.89	25.00	50	9.77	32.42	6.76	0.89	25.00	298	0.17
						75	8.42	32.55	6.32	1.32	25.31	268	0.24
75a)	8.42	32.550	6.32	1.32	25.31	100	8.09	33.13	4.60	2.06	25.82	221	0.30
90	8.04	32.865	5.30	1.84	25.61	150	7.57	33.63	3.65	2.37	26.28	177	0.40
100	8.09	33.135	4.60	2.06	25.82	200	7.07	33.86	3.25	2.42	26.53	154	0.49
110	8.14	33.330	4.22	2.14	25.96	250	7.02	33.96	2.43	2.75	26.62	147	0.56
120	7.78	33.407	4.21	2.41	26.07	300	6.08	33.99	1.86	2.84	26.77	133	0.63
130	7.64	33.459	4.08	2.24	26.13	400	5.44	34.07	1.15	3.09	26.91	120	0.76
140	7.50	33.528	4.02	2.38	26.21	500	4.92	34.14	0.67	3.31	27.02	110	0.87
150	7.57	33.639	3.65	2.37	26.28	600	4.54	34.20	0.48	3.52	27.11	102	0.98
160	7.26	33.677	3.79	-	26.36	700	4.19	34.27	0.35	3.66	27.21	93	1.08
						800	3.89	34.32	0.32	3.68	27.28	87	1.17
173b)	7.18	33.755	3.72	2.17	26.43	1000	3.37	34.41	0.35	3.62	27.40	76	1.33
						1200	2.95	34.47	0.47	3.52	27.49	68	1.47
175a)	7.28	33.785	3.40	2.42	26.44	1500	2.41	34.53	0.78	3.38	27.58	59	1.66
198b)	7.05	33.854	3.29	2.40	26.53								
248	7.06	33.962	2.46	2.75	26.61								
297	6.10	33.998	1.88	2.83	26.76								
492	4.95	34.134	0.69	3.29	27.01								
742	4.06	34.296	0.32	3.69	27.24								
991	3.39	34.417	0.35	3.62	27.40								
1288	2.78	34.491	0.54	3.48	27.52								
1590	2.27	34.557	0.91	3.33	27.61								
234-029	BROWN BEAR; June 24, 1959; 0300 GCT; 47°39'N, 126°14'W; sounding, 2103 m; wind, 120°, force 3; weather, intermittent slight drizzle; sea, slight; wire angle, 10°, 10°, 25°.												
0	14.33	32.050	5.99	0.66	23.86	0	14.33	32.05	5.99	0.66	23.86	405	0.00
10	14.14	32.046	6.03	0.72	23.90	10	14.14	32.04	6.03	0.72	23.90	402	0.04
20	12.94	32.173	6.34	0.75	24.24	20	12.94	32.17	6.34	0.75	24.24	370	0.08
30	11.48	32.242	6.56	0.70	24.57	30	11.48	32.24	6.56	0.70	24.57	339	0.11
49	8.80	32.478	6.64	0.98	25.19	50	8.73	32.46	6.65	0.98	25.20	279	0.18
						75	7.80	32.62	6.06	1.27	25.46	254	0.24
75a)	7.80	32.623	6.06	1.27	25.46	100	7.99	33.35	4.13	2.07	26.00	203	0.30
90	7.91	32.987	5.03	1.71	25.72	150	7.54	33.80	3.09	2.46	26.42	164	0.39
100	7.99	33.352	4.13	2.07	26.00	200	6.98	33.93	2.43	2.73	26.60	148	0.47
110	7.62	33.469	3.98	2.16	26.14	250	6.52	33.97	2.16	2.82	26.69	139	0.54
120	7.70	33.638	3.55	2.35	26.26	300	6.14	33.99	1.90	2.89	26.76	134	0.61
131	7.65	33.698	3.49	2.38	26.32	400	5.47	34.07	1.16	3.19	26.91	120	0.74
141	7.63	33.742	3.27	2.44	26.36	500	4.93	34.15	0.70	3.37	27.03	109	0.85
151	7.53	33.817	3.07	2.46	26.43	600	4.49	34.22	0.47	3.44	27.14	100	0.96
						700	4.13	34.28	0.33	3.51	27.22	92	1.05
161b)	7.40	33.836	2.86	2.50	26.46	800	3.89	34.33	0.30	3.61	27.29	86	1.14
						1000	3.44	34.40		3.65	27.39	78	1.30
162a)	7.36	33.866	2.88	2.60	26.49	1200	3.02	34.46		3.56	27.47	70	1.45
176	7.22	33.896	2.66	2.54	26.54	1500	2.46	34.53		3.42	27.58	60	1.65
176b)	7.25	33.895	2.69	2.61	26.53								
233	6.66	33.973	2.20	2.84	26.68								
279	6.30	33.978	2.08	2.81	26.72								
470	5.07	34.123	0.78	3.35	26.99								
709	4.10	34.291	0.32	3.52	27.23								
949	3.55	34.390	0.32	3.68	27.37								
1239	2.94	34.479	0.49	3.54	27.49								
1532	2.40	34.542	-	3.41	27.59								

a) Second cast.

b) Overlapping third cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; June 24, 1959; 0800 GCT; 47°41'N, 125°43'W; sounding, 1237 m; wind, 050°, force 3; weather, drizzle; sea, slight; wire angle, 10°, 08°, 08°, 10°. 234-030

0	14.72	32.066	5.88	0.68	23.79	0	14.72	32.06	5.88	0.68	23.79	412	0.00
10	14.50	32.079	5.94	0.70	23.84	10	14.50	32.07	5.94	0.70	23.84	407	0.04
20	12.80	32.116	6.34	0.70	24.22	20	12.80	32.11	6.34	0.70	24.22	372	0.08
30	11.26	32.202	6.72	0.77	24.57	30	11.26	32.20	6.72	0.77	24.57	338	0.12
50	8.82	32.482	6.54	1.15	25.20	50	8.82	32.48	6.54	1.15	25.20	279	0.18
						75	8.42	32.57	6.24	1.23	25.33	267	0.24
75	8.42	32.578	6.24	1.23	25.33	100	8.34	33.09	4.73	2.01	25.75	227	0.31
90	8.00	32.764	5.58	1.70	25.54	150	7.90	33.62	3.49	2.37	26.23	182	0.41
100	8.34	33.091	4.73	2.01	25.75	200	7.03	33.91	2.45	2.75	26.58	150	0.49
111	8.04	33.210	4.42	2.14	25.89	250	6.40	33.98	1.97	2.93	26.72	137	0.56
121	7.78	33.282	4.30	2.15	25.98	300	5.91	34.03	1.41	3.12	26.82	128	0.63
131	8.02	33.408	3.96	2.30	26.04	400	5.40	34.08	1.01	3.32	26.92	119	0.75
140	7.88	33.543	3.65	2.42	26.17	500	4.96	34.14	0.71	3.47	27.02	110	0.87
150	7.90	33.624	3.49	2.37	26.23	600	4.57	34.22	0.51	3.52	27.13	101	0.97
160	7.97	33.738	2.98	2.54	26.30	700	4.23	34.29	0.37	3.58	27.22	92	1.07
176	7.58	33.806	2.84	2.64	26.41	800	3.95	34.33	0.30	3.66	27.28	87	1.16
						1000	3.48	34.40	0.33	3.77	27.38	78	1.32
178	7.40	33.815	2.82	2.52	26.45	1200	3.02	34.48	0.54	3.74	27.49	68	1.47
202	6.99	33.928	2.42	2.76	26.59								
258	6.31	33.995	1.89	2.96	26.74								
303	5.88	34.031	1.38	3.13	26.82								
504	4.94	34.143	0.70	3.47	27.02								
753	4.07	34.329	0.32	3.61	27.26								
1003	3.47	34.406	0.33	3.77	27.38								
1202	3.02	34.488	0.54	3.74	27.49								

BROWN BEAR; June 24, 1959; 1500 GCT; 47°39'N, 125°17'W; sounding, 969 m; wind, 210°, force 3; weather, intermittent slight drizzle; sea, rough; wire angle, 00°, 00°, 00°. 234-031

0	14.50	31.812	5.97	0.72	23.64	0	14.50	31.81	5.97	0.72	23.64	426	0.00
10	14.48	31.815	6.04	0.74	23.65	10	14.48	31.81	6.04	0.74	23.65	426	0.04
20	12.10	32.103	6.41	0.76	24.34	20	12.10	32.10	6.41	0.76	24.34	360	0.08
30	10.28	32.280	6.70	0.96	24.81	30	10.28	32.28	6.70	0.96	24.81	316	0.12
50	8.70	32.275	6.45	1.12	25.05	50	8.70	32.27	6.45	1.12	25.05	293	0.18
						75	8.19	33.00	4.88	1.52	25.70	231	0.24
75	8.19	33.005	4.88	1.52	25.70	100	7.88	33.46	3.95	2.22	26.10	193	0.30
90	8.00	33.316	4.26	2.08	25.97	150	7.41	33.85	2.63	2.76	26.48	159	0.38
100	7.88	33.464	3.95	2.22	26.10	200	6.93	33.95	2.22	2.78	26.62	145	0.46
110	7.78	33.566	3.70	2.41	26.20	250	6.58	33.98	2.04	2.98	26.69	139	0.53
120	7.67	33.642	3.52	2.45	26.28	300	6.10	34.01	1.77	3.10	26.78	132	0.60
130	7.56	33.725	3.33	2.49	26.35	400	5.40	34.08	1.06	3.37	26.92	119	0.72
140	7.56	33.765	3.26	2.55	26.39	500	4.86	34.15	0.64	3.54	27.04	108	0.84
150	7.41	33.851	2.63	2.76	26.48	600	4.56	34.21	0.62	3.56	27.12	101	0.94
160	7.33	33.876	2.54	2.78	26.50	700	4.26	34.26	0.63	3.58	27.19	95	1.04
175	7.24	33.901	2.46	2.81	26.54	800	3.97	34.29	0.66	3.60	27.25	90	1.13
175a)	7.16	33.908	2.34	2.73	26.55								
200	6.93	33.951	2.22	2.78	26.62								
250	6.58	33.982	2.04	2.98	26.69								
300	6.10	34.016	1.77	3.10	26.78								
500	4.86	34.150	0.64	3.54	27.04								
700	4.26	34.267	0.63	3.58	27.19								
875	3.75	34.312	0.69	3.61	27.29								

a) Overlapping cast.

UW BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ cl/ton	ΔD dyn m

234-032 BROWN BEAR; June 24, 1959; 1800 GCT; 47°39'N, 125°06'W; sounding, 192 m; wind, 210°, force 4; weather, intermittent slight drizzle; sea, moderate; wire angle, 10°.

0	14.62	30.865	6.31	0.57	22.89	0	14.62	30.86	6.31	0.57	22.89	498	0.00
5	14.64	30.872	6.35	0.71	22.89	10	14.32	31.23	6.27	0.69	23.24	465	0.05
10	14.32	31.235	6.27	0.69	23.24	20	12.14	32.19	6.40	0.76	24.41	354	0.09
20	12.14	32.196	6.40	0.76	24.41	30	10.22	32.38	6.72	0.95	24.89	307	0.12
30	10.22	32.380	6.72	0.95	24.89	50	9.07	32.48	6.40	0.91	25.16	282	0.18
49	9.12	32.472	6.44	0.88	25.14	75	8.10	32.83	5.39	1.63	25.58	243	0.25
74	8.12	32.804	5.44	1.61	25.55	100	7.67	33.32	4.30	2.13	26.02	201	0.30
99	7.67	33.318	4.31	2.12	26.02	150	7.40	33.70	3.25	2.54	26.36	170	0.40
139	7.49	33.622	3.54	2.44	26.29								
179	7.10	33.881	2.32	2.83	26.54								

234-033 BROWN BEAR; June 24, 1959; 2100 GCT; 47°40'N, 124°46'W; sounding, 86 m; wind, 200°, force 3; weather, intermittent slight drizzle; sea, moderate; wire angle, missing.

0	14.80	30.454	6.55	0.53	22.54	0	14.80	30.45	6.55	0.53	22.54	532	0.00
5	13.32	31.497	6.50	0.72	23.64	10	12.16	31.99	6.40	0.77	24.25	369	0.04
10	12.16	31.992	6.40	0.77	24.25	20	11.04	32.13	6.15	0.92	24.56	339	0.08
20	11.04	32.139	6.15	0.92	24.56	30	9.02	32.28	4.14	2.24	25.01	296	0.11
30	9.02	32.285	4.14	2.24	25.01	50	8.02	32.70	4.36	2.00	25.49	251	0.17
40	8.39	32.491	3.90	2.11	25.27	75	7.39	33.52	3.34	2.43	26.22	182	0.22
60	7.72	32.988	4.32	2.05	25.75								
80	7.31	33.737	2.76	2.64	26.40								

234-034 BROWN BEAR; June 25, 1959; 0000 GCT; 47°40'N, 124°34'W; sounding, 36 m; wind, 230°, force 3; weather, intermittent slight drizzle; sea, moderate; wire angle, 15°.

0	12.83	31.291	7.43	0.78	23.58	0	12.83	31.29	7.43	0.78	23.58	432	0.00
5	12.86	31.280	7.47	0.80	23.57	10	9.92	32.14	4.39	1.76	24.76	320	0.04
10	9.92	32.140	4.39	1.76	24.76	20	7.47	33.57	2.46	2.81	26.25	178	0.06
15	8.27	32.884	3.80	2.34	25.59								
19	7.58	33.478	2.65	2.75	26.16								
29	7.60	33.490	2.62	2.56	26.17								

234-035 BROWN BEAR; June 25, 1959; 0200 GCT; 47°27'N, 124°34'W; sounding, 51 m; wind, 310°, force 3; weather, intermittent slight drizzle; sea, moderate; wire angle, 00°.

0	14.28	31.103	7.47		23.14	0	14.28	31.10	7.47		23.14	474	0.00
5	13.64	31.268	7.90		23.40	10	11.13	31.67	6.47		24.19	374	0.04
10	11.13	31.672	6.47		24.19	20	9.00	32.43	4.35		25.13	285	0.08
15	10.69	31.818	6.19		24.37	30	7.81	33.30	2.59		25.99	203	0.10
20	9.00	32.433	4.35		25.13								
30	7.81	33.302	2.59		25.99								
40	7.67	33.505	2.13		26.17								

234-036 BROWN BEAR; June 25, 1959; 0800 GCT; 47°14'N, 125°10'W; sounding, 1097 m; wind, 280°, force 4; weather, partly cloudy; sea, moderate; wire angle, 05°, 05°.

0a)	15.20	31.599	5.87		23.33	0	15.20	31.59	5.87		23.33	456	0.00
10	14.54	31.912	6.04		23.71	10	14.54	31.91	6.04		23.71	420	0.04
20	11.97	32.086	6.51		24.35	20	11.97	32.08	6.51		24.35	359	0.08
30	10.54	32.273	6.76		24.75	30	10.54	32.27	6.76		24.75	321	0.12
50	8.97	32.492	6.40		25.18	50	8.97	32.49	6.40		25.18	280	0.18
75	8.27	32.919	4.08		25.62	75	8.27	32.91	4.08		25.62	239	0.24
100	7.78	33.439	4.05		26.10	100	7.78	33.43	4.05		26.10	194	0.30
125	7.79	33.703	3.27		26.31	150	7.54	33.82	2.90		26.44	163	0.38
150	7.54	33.825	2.90		26.44	200	7.24	33.92	2.58		26.56	152	0.46
175	7.38	33.908	2.67		26.52	250	6.62	33.97	2.11		26.68	140	0.54
						300	6.10	34.01	1.71		26.78	132	0.60
199b)	7.25	33.928	2.59		26.56	400	5.45	34.07	1.23		26.91	120	0.73
299	6.11	34.018	1.72		26.78	500	4.92	34.13	0.84		27.02	110	0.85
498	4.93	34.130	0.85		27.02	600	4.53	34.20	0.55		27.12	102	0.95
697	4.20	34.268	0.38		27.20	700	4.19	34.26	0.38		27.20	94	1.05
896	3.64	34.386	0.36		27.35	800	3.89	34.32	0.31		27.28	87	1.14

a) Second cast.

b) First cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

234-037

BROWN BEAR; June 25, 1959; 1200 GCT; 47°14'N, 124°47'W; sounding, 146 m; wind, 290°, force 2; weather, partly cloudy; sea, moderate; wire angle, 04°, 04°, 04°.

0a)	13.93	30.860	6.98	23.03	0	13.93	30.86	6.98	23.03	484	0.00
5	14.00	31.085	6.99	23.19	10	12.30	31.87	6.36	24.13	380	0.04
10	12.30	31.874	6.36	24.13	20	11.62	32.08	6.18	24.42	353	0.08
20	11.62	32.081	6.18	24.42	30	8.88	32.36	4.33	25.09	288	0.11
					50	8.26	32.66	4.78	25.42	257	0.17
30b)	8.88	32.361	4.33	25.09	75	7.63	33.17	4.70	25.91	211	0.23
50	8.26	32.660	4.78	25.42	100	7.40	33.67	2.80	26.34	171	0.27
70	7.63	33.113	4.72	25.87							
90	7.53	33.432	3.92	26.13							
100c)	7.40	33.676	2.80	26.34							
120	7.44	33.841	2.89	26.47							
140	7.24	33.912	2.35	26.55							

234-038

BROWN BEAR; June 25, 1959; 1500 GCT; 47°14'N, 124°36'W; sounding, 77 m; wind, 290°, force 2; weather, partly cloudy; sea, slight; wire angle, 09°.

0	13.88	31.031	7.54	23.17	0	13.88	31.03	7.54	23.17	471	0.00
5	13.74	31.052	7.68	23.22	10	11.78	31.41	6.35	23.87	405	0.04
10	11.78	31.417	6.35	23.87	20	9.86	32.02	4.91	24.67	328	0.08
20	9.86	32.022	4.91	24.67	30	8.92	32.44	4.28	25.15	283	0.11
30	8.92	32.444	4.28	25.15	50	7.56	33.38	2.96	26.09	194	0.16
40	8.03	32.912	3.88	25.65							
49	7.60	33.345	3.05	26.05							
69	7.29	33.838	1.61	26.48							

234-039

BROWN BEAR; June 25, 1959; 1700 GCT; 47°14'N, 124°25'W; sounding, 36 m; wind, 310°, force 2; weather, cloudy; sea, slight; wire angle, 11°.

0	14.36	30.600	6.44	22.74	0	14.36	30.60	6.44	22.74	512	0.00
5	13.81	30.726	6.64	22.95	10	12.44	31.19	5.69	23.58	433	0.05
10	12.44	31.192	5.69	23.58	20	8.42	32.75	3.43	25.47	252	0.08
15	10.53	31.862	4.68	24.44	30	7.83	33.29	2.56	25.98	204	0.10
20	8.42	32.755	3.43	25.47							
25	8.01	33.074	3.07	25.78							
34	7.86	33.392	2.05	26.05							

234-040

BROWN BEAR; June 25, 1959; 1900 GCT; 47°04'N, 124°22'W; sounding, 42 m; wind, 330°, force 3; weather, cloudy; sea, smooth; wire angle, 08°, 12°.

0	14.66	30.030	6.63	22.24	0	14.66	30.03	6.63	22.24	560	0.00
5	14.58	30.011	6.57	22.25	10	14.48	30.05	6.68	22.30	555	0.06
10	14.48	30.056	6.68	22.30	20	10.80	31.75	5.01	24.31	363	0.10
15	14.32	31.069	6.59	23.11	30	8.31	32.88	3.37	25.59	241	0.13
20	10.80	31.754	5.01	24.31							
24	9.48	32.245	4.51	24.91							
34	8.08	33.240	2.35	25.90							

234-041

BROWN BEAR; June 25, 1959; 2300 GCT; 46°53'N, 124°15'W; sounding, 38 m; wind, 320°, force 4; weather, partly cloudy; sea, slight; wire angle, 16°, 17°.

0	15.74	28.408	6.44	20.77	0	15.74	28.40	6.44	20.77	701	0.00
					10	12.95	31.66	6.55	23.84	407	0.06
5	14.09	30.249	6.78	22.52	20	9.65	32.42	3.93	25.02	295	0.09
10	12.95	31.662	6.55	23.84	30	8.09	33.16	2.46	25.84	217	0.12
14	11.34	31.909	5.43	24.33							
19	9.94	32.318	4.23	24.89							
24	8.74	32.794	3.01	25.45							
33	8.09	33.277	2.55	25.92							

a) Second cast.
b) Third cast.
c) First cast.

UW BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
234-042	BROWN BEAR; June 26, 1959; 0200 GCT; 46°44'N, 124°13'W; sounding, 42 m; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.												
0	15.72	25.710	6.56		18.72	0	15.72	25.71	6.56		18.72	898	0.00
5	15.00	28.513	6.23		21.01	10	13.32	31.50	6.34		23.65	426	0.07
10	13.32	31.503	6.34		23.65	20	10.32	32.21	4.32		24.74	321	0.10
15	12.46	31.676	5.91		23.94	30	7.63	33.25	3.67		25.98	204	0.13
20	10.32	32.212	4.32		24.74								
25	8.38	32.872	4.36		25.57								
35	8.08	33.343	2.24		25.98								
234-043	BROWN BEAR; June 26, 1959; 0400 GCT; 46°43'N, 124°29'W; sounding, 97 m; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 02°.												
0	15.50	28.745	6.25		21.08	0	15.50	28.74	6.25		21.08	671	0.00
5	15.05	29.384	6.44		21.66	10	12.94	31.01	6.73		23.34	455	0.06
10	12.94	31.011	6.73		23.34	20	11.70	32.01	6.31		24.35	359	0.10
20	11.70	32.015	6.31		24.35	30	8.83	32.30	4.76		25.05	292	0.13
30	8.83	32.308	4.76		25.05	50	7.95	32.91	3.72		25.66	234	0.18
50	7.95	32.916	3.72		25.66								
70	7.54	33.639	2.72		26.29								
234-044	BROWN BEAR; June 26, 1959; 0700 GCT; 46°44'N, 124°46'W; sounding, 165 m; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 03°.												
0	15.55	30.666	6.16		22.54	0	15.55	30.66	6.16		22.54	532	0.00
5	15.56	30.669	6.19		22.54	10	14.84	30.93	6.35		22.90	498	0.05
10	14.84	30.934	6.35		22.90	20	12.19	31.97	6.48		24.23	371	0.09
20	12.19	31.978	6.48		24.23	30	11.24	32.11	6.54		24.51	344	0.13
30	11.24	32.115	6.54		24.51	50	8.05	32.65	5.71		25.45	255	0.19
50	8.05	32.651	5.71		25.45	75	7.63	33.06	4.80		25.83	219	0.25
75	7.63	33.062	4.80		25.83	100	7.60	33.52	3.35		26.19	185	0.30
100	7.60	33.520	3.35		26.19								
120	7.56	33.762	3.08		26.39								
140	7.26	33.870	2.07		26.51								
234-045	BROWN BEAR; June 26, 1959; 1200 GCT; 46°43'N, 124°58'W; sounding, 740 m; wind, 310°, force 2; weather, partly cloudy; sea, moderate; wire angle, 26°, 12°.												
0a)	15.64	29.867	5.88		21.91	0	15.64	29.86	5.88		21.91	592	0.00
10	14.64	32.053	6.04		23.80	10	14.64	32.05	6.04		23.80	411	0.05
20	12.80	32.159	6.46		24.25	20	12.80	32.15	6.46		24.25	369	0.09
30	11.44	32.274	6.81		24.60	30	11.44	32.27	6.81		24.60	336	0.12
50	9.06	32.438	6.80		25.12	50	9.06	32.43	6.80		25.12	286	0.19
75	8.53	32.956	5.04		25.61	75	8.53	32.95	5.04		25.61	240	0.25
100	7.78	33.397	4.17		26.06	100	7.78	33.39	4.17		26.06	197	0.31
125	7.62	33.663	3.80		26.30	150	7.45	33.82	3.19		26.45	161	0.40
150	7.46	33.816	3.29		26.44	200	7.05	33.94	2.59		26.60	148	0.47
175	7.34	33.903	2.76		26.53	250	6.55	33.99	2.13		26.71	138	0.54
						300	6.09	34.02	1.68		26.79	131	0.61
158b)	7.40	33.875	2.91		26.49	400	5.32	34.08	1.07		26.93	118	0.74
181	7.27	33.928	2.56		26.55	500	4.78	34.15	0.65		27.05	107	0.85
226	6.78	33.978	2.42		26.66	600	4.48	34.22	0.42		27.14	100	0.95
273	6.34	34.006	1.88		26.74								
460	4.97	34.126	0.79		27.00								
649	4.41	34.251	0.38		27.17								

a) Overlapping second cast.
b) First cast.

BROWN BEAR; June 26, 1959; 1500 GCT; 46°44'N, 125°14'W; sounding, 933 m; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 12°, 07°. 234-046

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
0a)	14.96	31.667	5.77		23.43	0	14.96	31.66	5.77		23.43	446	0.00
10	14.64	32.167	5.92		23.88	10	14.64	32.16	5.92		23.88	403	0.04
20	13.52	32.167	6.17		24.11	20	13.52	32.16	6.17		24.11	382	0.08
30	12.32	32.245	6.38		24.41	30	12.32	32.24	6.38		24.41	354	0.12
50	8.76	32.482	6.46		25.21	50	8.76	32.48	6.46		25.21	278	0.18
75	8.54	32.745	5.45		25.44	75	8.54	32.74	5.45		25.44	256	0.25
99	7.86	33.395	4.13		26.05	100	7.86	33.40	4.10		26.06	198	0.30
124	7.85	33.637	3.44		26.24	150	7.70	33.82	2.74		26.41	165	0.40
149	7.72	33.825	2.76		26.41	200	6.93	33.94	2.08		26.62	146	0.47
						250	6.63	33.95	1.95		26.66	142	0.55
169b)	7.29	33.900	2.50		26.53	300	6.39	34.01	1.77		26.74	135	0.62
						400	5.61	34.07	1.15		26.89	122	0.74
174a)	7.23	33.909	2.25		26.54	500	5.03	34.13	0.74		27.00	112	0.86
						600	4.65	34.17	0.53		27.08	105	0.97
193b)	6.99	33.947	2.11		26.61	700	4.27	34.24	0.39		27.18	97	1.07
240	6.66	33.949	1.96		26.65	800	3.90	34.32	0.33		27.28	87	1.16
287	6.51	34.002	1.87		26.72								
480	5.11	34.128	0.79		26.99								
676	4.36	34.229	0.42		27.15								
874	3.64	34.397	0.33		27.36								

BROWN BEAR; June 26, 1959; 1800 GCT; 46°43'N, 125°26'W; sounding, 1938 m; wind, 290°, force 4; weather, partly cloudy; sea, slight; wire angle, 09°, 10°, 31°. 234-047

OBSERVED						COMPUTED	INTERPOLATED						COMPUTED		
Z	T	S	O_2	PO_4-P		σ_t	Z	T	S	O_2	PO_4-P		σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L		g/L	m	°C	‰	ml/L	µg at/L		g/L	cl/ton	dyn m
0	14.74	32.241	5.86	0.68		23.92	0	14.74	32.24	5.86	0.68		23.92	399	0.00
10	14.36	32.234	5.97	0.72		24.00	10	14.36	32.23	5.97	0.72		24.00	392	0.04
20	13.20	32.237	6.18	0.68		24.23	20	13.20	32.23	6.18	0.68		24.23	370	0.08
30	11.11	32.386	6.68	0.70		24.74	30	11.11	32.38	6.68	0.70		24.74	322	0.11
50	9.48	32.466	6.54	0.95		25.08	50	9.48	32.46	6.54	0.95		25.08	290	0.17
							75	8.89	32.75	5.33	1.58		25.40	260	0.24
75	8.89	32.756	5.33	1.58		25.40	100	8.05	33.23	4.47	2.16		25.90	213	0.30
90	8.59	33.133	4.45	2.02		25.74	150	7.29	33.68	3.75	2.40		26.36	170	0.40
100	8.05	33.235	4.47	2.16		25.90	200	7.04	33.88	3.12	2.35		26.55	152	0.48
110	8.13	33.413	3.93	2.30		26.03	250	6.59	33.96	2.48	2.56		26.68	141	0.55
120	7.97	33.510	3.82	2.31		26.13	300	6.18	34.01	1.69	3.10		26.77	132	0.62
131	7.43	33.552	3.94	2.32		26.24	400	5.53	34.06	1.12	3.34		26.89	122	0.75
141	7.41	33.658	3.79	2.35		26.32	500	4.99	34.12	0.82	3.52		27.00	112	0.86
151	7.28	33.699	3.74	2.41		26.37	600	4.61	34.18	0.57	3.62		27.09	104	0.97
162	7.33	33.777	3.51	2.46		26.43	700	4.31	34.26	0.39	3.68		27.19	96	1.07
176	7.30	33.835	3.25	2.47		26.48	800	4.01	34.31	0.32	3.76		27.26	89	1.16
							1000	3.47	34.40	0.33	3.84		27.38	78	1.33
259	6.52	33.978	2.32	2.66		26.69	1200	3.06	34.47	0.51	3.71		27.48	70	1.48
282	6.36	34.008	1.83	3.01		26.74	1500	2.60	34.52	0.77	3.58		27.56	62	1.68
327	5.96	34.034	1.50	3.20		26.81									
372	5.70	34.057	1.22	3.28		26.86									
556	4.74	34.158	0.68	3.59		27.05									
739	4.20	34.280	0.34	3.70		27.21									
1014	3.44	34.415	0.34	3.84		27.40									
1290	2.90	34.497	0.59	3.66		27.51									
1567	2.52	34.535	0.83	3.56		27.57									

a) Overlapping second cast.
b) First cast.

UW

BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
234-048	BROWN BEAR; June 27, 1959; 0800 GCT; 46°44'N, 127°03'W; sounding, 2652 m; wind, 310°, force 5; weather, cloudy; sea, rough; wire angle, 12°, 10°, 15°.												
0	14.85	32.173	5.69	0.73	23.85	0	14.85	32.17	5.69	0.73	23.85	406	0.00
10	14.70	32.171	5.91	0.76	23.88	10	14.70	32.17	5.91	0.76	23.88	404	0.04
20	14.37	32.202	6.07	0.70	23.97	20	14.37	32.20	6.07	0.70	23.97	395	0.08
29	12.70	32.297	6.45	0.74	24.38	30	12.53	32.29	6.50	0.74	24.41	354	0.12
49	10.02	32.435	6.85	0.85	24.97	50	9.94	32.44	6.79	0.87	24.99	299	0.18
						75	8.71	32.83	5.24	1.60	25.49	252	0.25
76	8.69	32.857	5.17	1.63	25.51	100	8.56	33.46	3.83	2.23	26.00	203	0.31
91	8.72	33.313	4.09	2.17	25.86	150	8.06	33.82	2.89	2.58	26.36	170	0.40
101	8.54	33.473	3.80	2.25	26.01	200	7.55	33.91	2.66	2.63	26.50	157	0.48
110	8.33	33.564	3.61	2.47	26.12	250	7.16	33.97	2.32	2.85	26.61	148	0.56
121	8.30	33.683	3.30	2.50	26.21	300	6.70	34.00	1.96	2.99	26.69	140	0.63
131	8.22	33.746	3.08	2.54	26.27	400	5.88	34.05	1.32	3.30	26.84	127	0.77
141	8.14	33.800	2.90	2.58	26.33	500	5.21	34.11	0.88	3.52	26.97	115	0.89
151	8.05	33.820	2.89	2.58	26.36	600	4.78	34.19	0.81	3.60	27.08	105	1.00
161	7.90	33.852	2.84	2.58	26.41	700	4.42	34.26	0.77	3.65	27.18	97	1.10
177	7.69	33.905	2.68	2.68	26.48	800	4.11	34.31	0.65	3.69	27.25	90	1.19
						1000	3.60	34.39	0.36	3.75	27.36	80	1.36
180	7.81	33.875	2.77	2.60	26.44	1200	3.12	34.46	0.39	3.73	27.47	71	1.51
206	7.50	33.927	2.63	2.64	26.52								
256	7.11	33.986	2.28	2.87	26.62								
309	6.62	34.015	1.90	3.02	26.71								
515	5.12	34.123	0.83	3.55	26.99								
773	4.18	34.306	0.71	3.68	27.23								
1054	3.47	34.413	0.34	3.75	27.39								
1332	2.82	34.499	0.59	3.69	27.52								
234-049	BROWN BEAR; June 27, 1959; 2200 GCT; 46°44'N, 128°42'W; sounding, 2688 m; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 10°, 10°, 10°, 10°.												
0	14.21	32.437	5.86	0.73	24.18	0	14.21	32.43	5.86	0.73	24.18	375	0.00
10	14.17	32.444	5.92	0.82	24.20	10	14.17	32.44	5.92	0.82	24.20	373	0.04
20	13.20	32.433	6.19	0.84	24.39	20	13.20	32.43	6.19	0.84	24.39	356	0.07
30	12.22	32.513	6.52	0.85	24.64	30	12.22	32.51	6.52	0.85	24.64	332	0.11
49	9.60	32.468	6.65	1.02	25.06	50	9.56	32.46	6.63	1.02	25.06	291	0.17
						75	8.52	32.64	5.92	1.40	25.37	263	0.24
75	8.52	32.642	5.92	1.40	25.37	100	7.67	33.15	4.79	2.24	25.89	213	0.30
89	8.00	32.897	5.32	1.84	25.64	150	6.90	33.62	4.16	2.34	26.37	169	0.39
100	7.67	33.156	4.79	2.24	25.89	200	6.54	33.88	3.29	2.65	26.62	146	0.47
110	7.29	33.325	4.57	2.28	26.08	250	6.12	33.93	2.60	2.89	26.71	137	0.54
120	7.21	33.386	4.51	2.29	26.14	300	5.72	33.96	2.05	3.04	26.79	130	0.61
130	7.05	33.493	4.47	2.29	26.25	400	5.03	34.03	1.30	3.31	26.93	118	0.74
141	6.96	33.558	4.32	2.33	26.30	500	4.49	34.10	0.76	3.50	27.04	108	0.85
151	6.89	33.639	4.14	2.34	26.38	600	4.19	34.15	0.52	3.58	27.11	101	0.95
161	6.76	33.717	3.96	2.41	26.46	700	3.92	34.21	0.37	3.64	27.19	95	1.05
176	6.76	33.798	3.77	2.48	26.52	800	3.69	34.28	0.34	3.70	27.27	88	1.14
						1000	3.28	34.41	0.41	3.74	27.41	75	1.30
177	6.71	33.796	3.71	2.40	26.53	1200	2.92	34.46	0.45	3.55	27.48	69	1.45
201	6.53	33.881	3.27	2.66	26.62	1500	2.43	34.53	0.73	3.43	27.58	60	1.64
252	6.10	33.936	2.58	2.90	26.72								
303	5.70	33.964	2.02	3.05	26.79								
504	4.47	34.107	0.74	3.51	27.04								
757	3.78	34.249	0.32	3.67	27.23								
1006	3.27	34.419	0.41	3.74	27.41								
1306	2.74	34.497	0.52	3.48	27.52								
1606	2.28	34.550	0.90	3.44	27.61								

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; June 28, 1959; 1000 GCT; 47°40'N, 128°10'W; sounding, 2651 m; wind, 320°, force 5; weather, squalls; sea, rough; wire angle, 15°, 10°, 35°. 234-050

0	13.73	32.219	5.98	0.68	24.11	0	13.73	32.21	5.98	0.68	24.11	381	0.00
10	13.74	32.221	6.08	0.72	24.12	10	13.74	32.22	6.08	0.72	24.12	381	0.04
19	12.93	32.331	6.24	0.70	24.36	20	12.89	32.33	6.23	0.69	24.37	357	0.08
29	12.22	32.384	6.23	0.68	24.54	30	12.00	32.39	6.26	0.70	24.59	337	0.11
48	8.93	32.522	6.51	0.93	25.21	50	8.78	32.50	6.55	0.90	25.22	277	0.17
						75	7.79	32.57	6.17	1.07	25.42	258	0.24
76a)	7.78	32.597	6.12	1.10	25.44	100	8.01	33.29	4.34	1.97	25.95	208	0.30
91	8.02	32.976	5.02	1.74	25.70	150	7.50	33.80	3.18	2.43	26.43	164	0.39
101	8.00	33.310	4.28	1.99	25.97	200	6.96	33.90	2.99	2.36	26.58	150	0.47
111	7.82	33.459	3.93	2.18	26.11	250	6.41	33.95	2.54	2.63	26.69	139	0.54
121	7.72	33.576	3.85	2.24	26.21	300	5.95	33.97	2.07	2.75	26.77	133	0.61
132	7.68	33.688	3.57	2.36	26.31	400	5.22	34.02	1.30	2.95	26.90	121	0.73
141	7.58	33.753	3.33	2.35	26.38	500	4.81	34.10	0.84	3.17	27.01	111	0.85
						600	4.48	34.17	0.52	3.33	27.10	103	0.96
147b)	7.44	33.803	3.37	2.22	26.43	700	4.23	34.24	0.38	3.39	27.18	96	1.06
						800	4.00	34.29	0.31	3.42	27.24	91	1.15
151a)	7.50	33.811	3.16	2.44	26.43	1000	3.47	34.39	0.38	3.48	27.38	79	1.32
162	7.44	33.849	3.17	2.36	26.47	1200	3.02	34.46	0.51	3.43	27.47	70	1.47
168b)	7.23	33.868	3.10	2.30	26.51								
177a)	7.23	33.903	2.93	2.46	26.54								
210b)	6.85	33.916	2.96	2.36	26.60								
251	6.40	33.958	2.53	2.64	26.69								
418	5.11	34.034	1.19	2.99	26.92								
628	4.40	34.199	0.46	3.36	27.12								
849	3.88	34.329	0.30	3.43	27.28								
1124	3.18	34.444	0.46	3.46	27.44								
1404	2.65	34.510	0.67	3.24	27.55								

BROWN BEAR; June 29, 1959; 0100 GCT; 48°06'N, 126°01'W; sounding, 1250 m; wind, 310°, force 2; weather, partly cloudy; sea, slight; wire angle, 45°, 15°, 40°. 234-051

0a)	15.24	32.028	5.87	0.62	23.65	0	15.24	32.02	5.87	0.62	23.65	426	0.00
10	14.59	32.034	5.99	0.63	23.79	10	14.59	32.03	5.99	0.63	23.79	412	0.04
19	13.04	32.105	6.34	0.64	24.16	20	12.81	32.11	6.39	0.64	24.22	372	0.08
29	10.96	32.212	6.71	0.70	24.63	30	10.77	32.23	6.70	0.73	24.68	327	0.12
48	8.30	32.542	6.48	1.12	25.32	50	8.23	32.54	6.46	1.11	25.33	266	0.18
72	7.76	32.691	5.89	1.27	25.52	75	7.76	32.77	5.67	1.36	25.58	242	0.24
97	7.80	33.280	4.36	1.94	25.97	100	7.81	33.34	4.23	2.00	26.02	201	0.29
						150	7.72	33.83	2.79	2.41	26.42	164	0.38
108c)	7.82	33.484	3.90	2.15	26.13	200	6.78	33.87	3.12	2.43	26.58	149	0.46
147	7.73	33.826	2.84	2.37	26.41	250	6.17	33.91	3.02	2.51	26.69	139	0.54
174	7.48	33.886	2.68	2.56	26.49	300	6.14	33.98	2.11	2.82	26.75	134	0.60
203	6.72	33.879	3.15	2.42	26.59	400	5.52	34.07	1.22	3.13	26.90	121	0.73
254	6.14	33.917	2.99	2.52	26.70	500	4.90	34.14	0.76	3.31	27.03	109	0.85
						600	4.53	34.21	0.54	3.37	27.12	101	0.95
327d)	6.09	34.018	1.68	2.96	26.78	700	4.24	34.27	0.42	3.40	27.20	94	1.05
524	4.81	34.157	0.66	3.35	27.05	800	3.97	34.32	0.36	3.43	27.27	88	1.14
						1000	3.50	34.40	0.42	3.47	27.38	78	1.30
531c)	4.71	34.176	0.62	3.33	27.07								
726b)	4.17	34.283	0.40	3.41	27.22								
1050	3.40	34.425	0.47	3.47	27.41								

a) Second cast.
b) Overlapping third cast.
c) First cast.
d) Third cast.

UW

BB-234

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

234-052 BROWN BEAR; June 29, 1959; 0400 GCT; 48°05'N, 125°46'W; sounding, 585 m; wind, 310°, force 5; weather, cloudy; sea, slight; wire angle, 25°, 25°, 30°.

0	15.56	31.889	5.82	0.61	23.47	0	15.56	31.88	5.82	0.61	23.47	442	0.00
9	14.68	32.047	5.95	0.67	23.78	10	14.36	32.05	6.04	0.68	23.86	406	0.04
18	12.30	32.134	6.54	0.70	24.33	20	12.00	32.15	6.60	0.68	24.40	354	0.08
27	10.96	32.240	6.71	0.69	24.66	30	10.37	32.30	6.66	0.80	24.81	316	0.11
						50	8.27	32.55	6.23	1.21	25.33	266	0.17
44	8.40	32.532	6.37	1.20	25.30	75	7.79	33.02	4.97	1.74	25.77	224	0.23
66	7.95	32.740	5.63	1.40	25.53	100	7.61	33.43	4.08	2.17	26.12	192	0.28
89	7.60	33.367	4.19	2.13	26.07	150	7.27	33.78	3.25	2.41	26.44	162	0.37
						200	6.95	33.93	2.55	2.64	26.60	147	0.45
129	7.50	33.632	3.68	2.30	26.29	250	6.50	33.98	2.13	2.84	26.70	138	0.52
159	7.19	33.837	3.09	2.46	26.49	300	6.00	34.02	1.64	3.04	26.80	130	0.59
188	6.98	33.915	2.68	2.60	26.58	400	5.26	34.09	0.89	3.30	26.95	116	0.71
218	6.86	33.960	2.37	2.70	26.64	500	4.87	34.14	0.62	3.34	27.03	109	0.82
273	6.26	34.000	1.93	2.93	26.75								
324	5.79	34.040	1.42	3.12	26.84								
537	4.82	34.164	0.64	3.30	27.05								

234-053 BROWN BEAR; June 29, 1959; 0700 GCT; 48°05'N, 125°30'W; sounding, 142 m; wind, 320°, force 4; weather, sky obscured; sea, slight; wire angle, 10°.

0	15.60	31.704	6.01		23.32	0	15.60	31.70	6.01		23.32	456	0.00
5	15.60	31.700	6.03		23.32	10	13.44	32.08	6.24		24.07	386	0.04
10	13.44	32.085	6.24		24.07	20	11.32	32.16	6.64		24.53	342	0.08
21	11.16	32.170	6.66		24.57	30	10.17	32.34	6.74		24.87	310	0.11
32	9.96	32.375	6.74		24.93	50	8.32	32.51	6.38		25.30	269	0.17
51	8.26	32.526	6.36		25.31	75	7.71	32.63	6.10		25.48	252	0.23
77	7.68	32.663	6.03		25.51	100	7.50	33.27	4.48		26.01	202	0.29
104	7.46	33.358	4.24		26.08								
136	7.02	33.796	2.62		26.49								

234-054 BROWN BEAR; June 29, 1959; 0900 GCT; 48°05'N, 125°17'W; sounding, 265 m; wind, 320°, force 3; weather, sky obscured; sea, slight; wire angle, 00°, 10°.

0	12.89	31.326	7.71		23.59	0	12.89	31.32	7.71		23.59	431	0.00
5	12.88	31.340	7.64		23.61	10	13.42	31.57	7.08		23.68	423	0.04
10	13.42	31.571	7.08		23.68	20	11.78	32.12	6.18		24.42	353	0.08
20	11.78	32.126	6.18		24.42	30	9.99	32.43	6.75		24.97	300	0.12
30	9.99	32.430	6.75		24.97	50	7.92	32.65	5.52		25.46	253	0.17
50	7.92	32.656	5.52		25.46	75	7.62	33.11	4.69		25.87	215	0.23
75	7.62	33.113	4.69		25.87	100	7.21	33.61	3.33		26.32	173	0.28
100	7.21	33.613	3.33		26.32	150	7.19	33.74	3.08		26.42	164	0.36
140	7.20	33.751	3.10		26.43	200	7.12	33.88	2.81		26.54	153	0.44
180	7.17	33.793	2.97		26.46								
197	7.18	33.872	2.86		26.53								
222	6.76	33.952	2.45		26.65								
246	6.58	33.983	2.14		26.69								

234-055 BROWN BEAR; June 29, 1959; 1200 GCT; 48°04'N, 125°04'W; sounding, 329 m; wind, 290°, force 2; weather, intermittent slight drizzle; sea, slight; wire angle, 00°.

0	12.78	31.537	8.01		23.77	0	12.78	31.53	8.01		23.77	414	0.00
5	11.96	31.474	7.94		23.88	10	10.71	31.59	6.35		24.20	373	0.04
10	10.71	31.590	6.35		24.20	20	9.53	31.90	4.63		24.63	332	0.07
20	9.53	31.905	4.63		24.63	30	8.70	32.24	3.71		25.03	294	0.10
30	8.70	32.247	3.71		25.03	50	8.15	32.70	3.37		25.47	253	0.16
50	8.15	32.708	3.37		25.47	75	7.36	33.43	3.49		26.16	188	0.22
75	7.36	33.430	3.49		26.16	100	6.94	33.78	2.41		26.49	157	0.26
100	6.94	33.784	2.41		26.49	150	6.86	33.89	2.56		26.59	148	0.33
150	6.86	33.890	2.56		26.59	200	6.62	33.95	2.28		26.66	141	0.41
200	6.62	33.952	2.28		26.66	250	6.41	33.99	2.00		26.72	136	0.48
250	6.41	33.998	2.00		26.72								

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; June 29, 1959; 1500 GCT; 48°04'N, 124°52'W; sounding, 51 m; wind, 310°, force 2; weather, intermittent slight drizzle; sea, smooth; wire angle, 00°. 234-056

0	13.55	31.264	8.21	23.42	0	13.55	31.26	8.21	23.42	448	0.00
5	13.42	31.267	8.11	23.44	10	11.19	31.35	6.69	23.93	399	0.04
10	11.19	31.355	6.69	23.93	20	8.79	32.38	3.92	25.12	285	0.08
15	9.82	31.804	4.85	24.51	30	7.88	33.01	3.13	25.75	226	0.10
20	8.79	32.384	3.92	25.12							
25	8.21	32.795	3.33	25.53							
35	7.80	33.035	3.33	25.78							

BROWN BEAR; June 29, 1959; 1800 GCT; 48°18'N, 124°59'W; sounding, 300 m; wind, 290°, force 2; weather, overcast; sea, slight; wire angle, 10°, 10°. 234-057

0	13.13	31.579	7.86	23.74	0	13.13	31.57	7.86	23.74	417	0.00
5	11.04	31.840	7.04	24.33	10	9.53	31.90	4.69	24.63	332	0.04
10	9.53	31.902	4.69	24.63	20	8.78	32.37	3.82	25.12	286	0.07
20	8.78	32.371	3.82	25.12	30	8.24	32.67	3.17	25.43	256	0.10
30	8.24	32.678	3.17	25.43	50	7.55	33.26	2.99	26.00	203	0.14
50	7.55	33.264	2.99	26.00	75	7.06	33.70	2.47	26.41	164	0.19
74	7.08	33.696	2.48	26.40	100	6.78	33.89	2.26	26.60	146	0.23
99	6.78	33.894	2.25	26.60	150	6.65	33.93	2.30	26.65	142	0.30
					200	6.47	33.96	2.01	26.69	139	0.37
148	6.66	33.937	2.32	26.64							
197	6.48	33.964	2.02	26.69							
246	6.34	33.990	1.93	26.73							

235-001

BROWN BEAR; July 16, 1959; 1600 GCT;[a] 48°44'N, 125°39'W; sounding, 150 m; wind, 310°, force 4; weather, clear; sea, slight; wire angle, 10°.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ cl/ton	ΔD dyn m
0	13.18	31.358	7.10	0.58	23.56	0	13.18	31.35	7.10	0.58	23.56	434	0.00
10	13.14	31.365	7.10	0.54	23.57	10	13.14	31.36	7.10	0.54	23.57	433	0.04
20	10.47	31.719	4.23	1.87	24.33	20	10.47	31.71	4.23	1.87	24.33	361	0.08
30	8.90	32.286	3.02	2.47	25.03	30	8.90	32.28	3.02	2.47	25.03	294	0.12
49	8.23	32.724	2.26	2.68	25.47	50	8.23	32.73	2.27	2.69	25.48	252	0.17
74	8.11	32.842	2.33	2.75	25.59	75	8.10	32.84	2.32	2.73	25.59	242	0.23
98	7.98	32.930	2.24	2.55	25.67	100	7.97	32.94	2.24	2.55	25.68	233	0.29
123	7.84	33.031	2.23	2.85	25.77								

235-002

BROWN BEAR; July 17, 1959; 1600 GCT; 49°30'N, 128°12'W; sounding, 2377 m; wind, 320°, force 6; weather, partly cloudy; sea, moderate; wire angle, 30°, 25°, 10°.

0b)	14.20	32.464	6.11	0.78	24.21	0	14.20	32.46	6.11	0.78	24.21	372	0.00
10	14.20	32.469	6.11	0.75	25.77	10	14.20	32.46	6.11	0.75	24.21	372	0.04
20	14.21	32.464	6.13	0.81	24.20	20	14.21	32.46	6.13	0.81	24.20	373	0.07
30	13.96	32.471	6.18	0.73	24.26	30	13.96	32.47	6.18	0.73	24.26	368	0.11
49	9.64	32.535	6.95	0.92	25.11	50	9.59	32.53	6.96	0.93	25.11	287	0.18
74	8.52	32.621	6.83	1.10	25.35	75	8.47	32.62	6.78	1.11	25.36	264	0.24
98	7.54	32.810	5.88	1.35	25.64	100	7.50	32.85	5.89	1.41	25.68	233	0.31
123	7.14	33.299	5.63	1.88	26.08	150	6.99	33.61	4.47	1.99	26.35	171	0.41
148	6.98	33.594	4.55	1.99	26.33	200	6.93	33.87	3.27	2.35	26.56	151	0.49
						250	6.10	33.88	3.18	2.47	26.68	140	0.56
152c)	7.00	33.631	4.38	1.99	26.36	300	5.75	33.92	2.49	2.61	26.75	134	0.63
168	7.29	33.801	3.31	2.36	26.46	400	5.19	34.01	1.36	2.89	26.89	122	0.76
						500	4.78	34.10	0.79	3.17	27.01	111	0.88
172b)	7.32	33.847	2.92	2.43	26.48	600	4.41	34.18	0.45	3.38	27.11	102	0.98
						700	4.07	34.25	0.32	3.44	27.20	94	1.08
212c)	6.75	33.885	3.34	2.35	26.59	800	3.75	34.30	0.29	3.47	27.28	87	1.17
254	6.04	33.888	3.16	2.48	26.69	1000	3.19	34.39	0.32	3.60	27.40	76	1.33
425	5.07	34.036	1.14	2.95	26.92	1200	2.75	34.45	0.44	3.61	27.49	67	1.48
637	4.28	34.218	0.36	3.43	27.15								
862d)	3.57	34.333	0.28	3.48	27.32								
1289	2.60	34.484	0.52	3.55	27.53								
1462	2.38	34.526	0.71	3.32	27.58								

a) Times reported are those of the messenger release of the shallow cast to the nearest hour (when half way between, to the nearest even hour). Wire angles are given in the numerical order of casts.
b) Overlapping third cast.
c) First cast.
d) Second cast.

UW

BB-235

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
235-003 BROWN BEAR; July 18, 1959; 1500 GCT; 50°40'N, 131°57'W; sounding, 2838 m; wind, 290°, force 1; weather, fog; sea, smooth; wire angle, 08°, 05°.													
0a)	13.59	32.156	6.15	0.50	24.09	0	13.59	32.15	6.15	0.50	24.09	383	0.00
10	13.34	32.157	6.14	0.36	24.14	10	13.34	32.15	6.14	0.36	24.14	379	0.04
20	13.01	32.160	6.24	0.59	24.22	20	13.01	32.16	6.24	0.59	24.22	372	0.08
30	10.60	32.318	6.37	0.38	24.77	30	10.60	32.31	6.37	0.38	24.77	319	0.11
50	8.18	32.576	6.04	1.31	25.36	50	8.18	32.57	6.04	1.31	25.36	263	0.17
75	7.42	32.865	5.07	1.57	25.70	75	7.42	32.86	5.07	1.57	25.70	231	0.23
100	7.26	33.124	4.41	1.95	25.93	100	7.26	33.12	4.41	1.95	25.93	210	0.29
125	6.92	33.491	3.90	2.10	26.26	150	6.76	33.68	3.19	2.20	26.43	162	0.38
150	6.72	33.722	3.44	2.39	26.47	200	6.33	33.85	3.06	2.36	26.62	145	0.46
						250	5.86	33.93	2.47	2.67	26.75	134	0.53
169b)	6.66	33.743	3.47	2.06	26.49	300	5.55	33.97	1.83	2.81	26.82	128	0.59
						400	5.11	34.05	1.13	2.88	26.93	118	0.71
175a)	6.58	33.794	3.19	2.11	26.54	500	4.66	34.12	0.68	2.99	27.04	108	0.83
						600	4.20	34.17	0.51	3.18	27.13	100	0.93
193b)	6.44	33.834	3.23	2.34	26.59	700	3.83	34.22	0.38	3.31	27.21	93	1.03
242	5.92	33.924	2.59	2.64	26.73	800	3.59	34.27	0.34	3.33	27.27	88	1.12
290	5.59	33.964	1.91	2.80	26.80	1000	3.19	34.37	0.32	3.34	27.39	77	1.28
485	4.74	34.111	0.71	2.96	27.02	1200	2.77	34.43	0.35	3.38	27.47	69	1.43
728	3.74	34.235	0.36	3.33	27.22	1500	2.36	34.51	0.59	3.31	27.57	60	1.62
972	3.26	34.361	0.32	3.33	27.37								
1458	2.40	34.503	0.54	3.33	27.56								
1653	2.26	34.541	0.79	3.22	27.60								
235-004 BROWN BEAR; July 19, 1959; 1500 GCT; 51°40'N, 135°55'W; sounding, 3566 m; wind, 250°, force 5; weather, fog; sea, slight; wire angle, 25°, 05°.													
0a)	12.39	32.243	6.35	0.52	24.40	0	12.39	32.24	6.35	0.52	24.40	354	0.00
10	12.36	32.244	6.39	0.73	24.40	10	12.36	32.24	6.39	0.73	24.40	354	0.04
20	12.33	32.267	6.36	0.67	24.42	20	12.33	32.26	6.36	0.67	24.42	352	0.07
30	12.12	32.313	6.39	0.71	24.50	30	12.12	32.31	6.39	0.71	24.50	345	0.10
50	8.58	32.535	-	1.00	25.27	50	8.58	32.53	6.39	1.00	25.27	272	0.17
75	7.05	32.605	6.39	1.33	25.55	75	7.05	32.60	6.39	1.33	25.55	246	0.23
100	6.74	32.903	5.43	1.05	25.82	100	6.74	32.90	5.43	1.05	25.82	220	0.29
125	6.41	33.154	4.99	1.79	26.06	150	6.13	33.51	4.56	2.02	26.38	167	0.39
150	6.25	33.512	4.42	2.13	26.37	200	5.48	33.76	3.88	2.34	26.66	141	0.46
						250	5.01	33.84	3.13	2.55	26.78	130	0.53
164b)	5.82	33.654	4.46	2.02	26.53	300	4.74	33.89	2.37	2.73	26.85	124	0.60
						400	4.57	34.01	1.36	2.89	26.96	114	0.72
175a)	5.78	33.693	4.01	1.76	26.57	500	4.28	34.09	0.80	3.05	27.06	106	0.82
						600	3.89	34.15	0.61	3.21	27.14	98	0.93
185b)	5.59	33.748	4.12	2.29	26.63	700	3.58	34.21	0.47	3.30	27.22	91	1.02
233	5.17	33.829	3.46	2.45	26.74	800	3.41	34.27	0.40	3.25	27.29	86	1.11
280	4.76	33.872	2.61	2.70	26.83	1000	3.06	34.36	0.35	3.29	27.39	76	1.27
470	4.41	34.074	0.87	2.99	27.03	1200	2.72	34.42	0.41	3.41	27.47	69	1.42
700	3.58	34.213	0.47	3.30	27.22	1500	2.34	34.50	0.62	3.25	27.57	61	1.61
938	3.18	34.347	0.34	3.22	27.36								
1412	2.44	34.485	0.54	3.34	27.54								
1604	2.25	34.526	0.72	3.10	27.59								

a) Overlapping second cast.
b) First cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

235-005

BROWN BEAR; July 20, 1959; 1500 GCT; 52°18'N, 139°35'W; sounding, 3658 m; wind, 280°, force 5; weather, cloudy; sea, moderate; wire angle, 30°, 10°.

0a)	10.90	32.664	6.34	1.23	24.99	0	10.90	32.66	6.34	1.23	24.99	297	0.00
10	10.90	32.666	6.34	1.24	24.99	10	10.90	32.66	6.34	1.24	24.99	297	0.03
20	10.89	32.671	6.41	1.22	25.00	20	10.89	32.67	6.41	1.22	25.00	297	0.06
30	10.70	32.680	6.39	1.21	25.04	30	10.70	32.68	6.39	1.21	25.04	293	0.09
49	6.86	32.838	7.16	1.25	25.75	50	6.79	32.83	7.16	1.26	25.76	225	0.14
74	5.52	32.892	6.84	1.50	25.97	75	5.51	32.89	6.82	1.50	25.97	205	0.20
99	5.29	33.062	6.06	1.61	26.13	100	5.29	33.08	6.00	1.63	26.14	189	0.24
123	5.16	33.480	4.76	2.05	26.48	150	4.88	33.74	3.63	2.38	26.71	136	0.32
						200	4.32	33.82	2.98	2.68	26.84	124	0.39
146b)	4.90	33.724	3.62	2.32	26.69	250	4.30	33.87	2.34	2.79	26.88	120	0.45
						300	4.18	33.93	1.88	2.82	26.94	115	0.51
148a)	5.02	33.736	3.71	2.49	26.69	400	3.96	34.04	1.15	2.91	27.05	105	0.62
						500	3.77	34.12	0.76	3.08	27.13	98	0.72
165b)	4.47	33.786	3.44	2.43	26.79	600	3.59	34.19	0.51	3.21	27.21	92	0.82
						700	3.40	34.26	0.43	3.27	27.28	85	0.91
172a)	4.48	33.782	3.45	2.52	26.79	800	3.22	34.31	0.39	3.30	27.34	80	0.99
						1000	2.92	34.38	0.37	3.29	27.42	73	1.14
208b)	4.30	33.838	2.87	2.71	26.85	1200	2.65	34.44	0.45	3.26	27.49	67	1.28
250	4.30	33.876	2.34	2.79	26.88								
417	3.92	34.060	1.05	2.93	27.07								
625	3.54	34.218	0.47	3.23	27.23								
838	3.16	34.333	0.38	3.31	27.36								
1279	2.55	34.460	0.51	3.25	27.52								
1469	2.34	34.508	0.73	3.22	27.57								

235-006

BROWN BEAR; July 21, 1959; 1600 GCT; 52°58'N, 143°27'W; sounding, 3840 m; wind, 210°, force 6; weather, cloudy; sea, rough; wire angle, 40°, 20°, 15°.

0c)	11.20	32.604	6.44	1.19	24.89	0	11.20	32.60	6.44	1.19	24.89	307	0.00
10	11.18	32.604	6.44	1.25	24.90	10	11.18	32.60	6.44	1.25	24.90	307	0.03
19	11.21	32.603	6.39	1.23	24.89	20	11.27	32.60	6.38	1.23	24.88	308	0.06
29	11.18	32.608	6.44	1.25	24.90	30	10.90	32.61	6.51	1.26	24.96	302	0.09
48	7.02	32.721	7.26	1.41	25.64	50	6.82	32.72	7.24	1.44	25.67	234	0.15
72	5.20	32.803	6.93	1.68	25.93	75	5.08	32.80	6.95	1.69	25.95	207	0.20
97	4.62	32.951	6.50	1.71	26.12	100	4.68	33.01	6.23	1.73	26.16	188	0.25
121	4.98	33.361	4.78	2.26	26.40	150	5.00	33.71	3.45	2.56	26.68	139	0.33
						200	4.67	33.84	2.47	2.71	26.82	126	0.40
137b)	5.10	33.510	4.19	2.14	26.51	250	4.40	33.90	1.88	2.78	26.89	119	0.46
						300	4.25	33.96	1.39	2.86	26.96	114	0.52
145c)	4.99	33.666	3.73	2.56	26.64	400	4.01	34.06	0.75	3.00	27.06	104	0.63
						500	3.82	34.15	0.50	3.10	27.15	96	0.73
148b)	5.12	33.708	3.54	2.52	26.65	600	3.63	34.22	0.36	3.18	27.23	90	0.82
						700	3.42	34.28	0.32	3.23	27.29	84	0.91
169c)	4.81	33.825	2.81	2.63	26.78	800	3.15	34.35	0.38	3.26	27.37	77	0.99
						1000	2.60	34.45	0.60	3.26	27.50	65	1.13
187b)	4.79	33.837	2.65	2.70	26.79	1200	2.24	34.53	0.76	3.24	27.60	56	1.25
224	4.48	33.871	2.17	2.73	26.86	1500	2.07	34.56	0.91	3.17	27.64	53	1.41
374	4.06	34.040	0.84	2.97	27.04								
562	3.70	34.201	0.39	3.15	27.20								
748	3.32	34.314	0.32	3.25	27.33								
1146d)	2.32	34.512	0.72	3.25	27.58								
1644	2.14	34.547	0.94	3.11	27.61								

a) Overlapping second cast.
b) First cast.
c) Overlapping third cast.
d) Second cast.

UW

BB-235

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
235-007 BROWN BEAR; July 22, 1959; 1600 GCT; 53°30'N, 146°42'W; sounding, 4114 m; wind, 270°, force 5; weather, intermittent slight drizzle; sea, rough; wire angle, 38°, 15°.													
0a)	10.82	32.852	6.50	1.44	25.16	0	10.82	32.85	6.50	1.44	25.16	282	0.00
10	10.80	32.854	6.48	1.53	25.16	10	10.80	32.85	6.48	1.53	25.16	282	0.03
19	10.88	32.856	6.45	1.48	25.15	20	10.89	32.85	6.44	1.48	25.14	283	0.06
29	10.32	32.854	6.50	1.50	25.24	30	9.94	32.86	6.56	1.52	25.31	267	0.08
48	4.93	32.951	7.25	1.83	26.08	50	4.80	32.95	7.24	1.85	26.10	193	0.13
73	3.68	32.990	7.10	1.95	26.24	75	3.61	32.98	7.16	1.93	26.24	179	0.18
97	3.23	33.021	6.97	1.91	26.31	100	3.29	33.08	6.71	1.99	26.35	169	0.22
121	3.60	33.374	5.60	2.49	26.55	150	3.79	33.72	2.41	2.77	26.81	126	0.29
						200	3.81	33.93	0.97	3.03	26.98	110	0.35
131b)	3.74	33.639	3.24	2.52	26.75	250	3.80	34.00	0.65	2.99	27.03	106	0.41
						300	3.69	34.04	0.67	2.97	27.08	102	0.46
145a)	3.92	33.795	1.87	3.01	26.85	400	3.58	34.13	0.51	2.89	27.16	95	0.56
						500	3.48	34.21	0.34	2.86	27.23	88	0.65
149b)	3.69	33.619	3.22	2.46	26.73	600	3.32	34.27	0.31	2.92	27.30	83	0.73
						700	3.14	34.31	0.37	3.01	27.34	79	0.82
169a)	3.80	33.885	1.23	3.06	26.94	800	2.99	34.35	0.41	3.05	27.39	75	0.89
						1000	2.72	34.41	0.48	3.06	27.46	69	1.04
187b)	3.66	33.882	1.57	3.05	26.95	1200	2.50	34.46	0.57	3.06	27.52	64	1.17
224	3.87	33.982	0.63	3.00	27.01								
336	3.62	34.073	0.67	2.95	27.11								
560	3.40	34.258	0.29	2.87	27.27								
749	3.06	34.332	0.39	3.05	27.37								
1160	2.54	34.458	0.55	3.06	27.51								
1346	2.36	34.495	0.64	3.06	27.56								
235-008 BROWN BEAR; July 23, 1959; 1500 GCT; 53°42'N, 149°43'W; sounding, 4279 m; wind, 300°, force 4; weather, partly cloudy; sea, moderate; wire angle, 12°, 04°.													
0a)	10.54	32.757	6.51	1.41	25.13	0	10.54	32.75	6.51	1.41	25.13	285	0.00
10	10.52	32.758	6.52	1.29	25.13	10	10.52	32.75	6.52	1.29	25.13	284	0.03
20	10.55	32.760	6.51	1.31	25.13	20	10.55	32.76	6.51	1.31	25.13	284	0.06
30	9.49	32.843	6.73	1.72	25.37	30	9.49	32.84	6.73	1.72	25.37	262	0.08
50	4.60	32.887	7.18	1.72	26.06	50	4.60	32.88	7.18	1.72	26.06	196	0.13
75	3.64	32.999	6.51	2.00	26.25	75	3.64	32.99	6.51	2.00	26.25	179	0.18
100	3.76	33.366	4.30	2.36	26.53	100	3.76	33.36	4.30	2.36	26.53	152	0.22
125	3.94	33.792	1.68	3.11	26.85	150	3.96	33.91	0.96	3.39	26.95	113	0.28
150	3.96	33.913	0.96	3.39	26.95	200	3.89	34.00	0.47	3.06	27.02	106	0.34
						250	3.85	34.05	0.36	3.07	27.07	102	0.39
168b)	3.94	33.943	0.74	-	26.97	300	3.78	34.08	0.38	3.20	27.10	100	0.44
						400	3.62	34.16	0.36	3.18	27.18	93	0.54
175a)	3.94	33.965	0.67	3.23	26.99	500	3.45	34.23	0.36	3.22	27.25	87	0.63
						600	3.27	34.28	0.39	3.34	27.31	82	0.71
192b)	3.90	33.990	0.50	3.09	27.02	700	3.10	34.32	0.41	3.39	27.36	78	0.79
240	3.86	34.042	0.36	3.03	27.06	800	2.90	34.35	0.41	3.33	27.40	74	0.87
289	3.80	34.076	0.38	3.21	27.09	1000	2.51	34.44	0.58	3.13	27.50	64	1.01
480	3.48	34.228	0.36	3.19	27.24	1200	2.18	34.54	0.89	2.94	27.61	55	1.12
719	3.06	34.333	0.42	3.39	27.37	1500	2.01	34.58	1.06	2.93	27.66	51	1.28
965	2.58	34.425	0.51	3.18	27.48								
1155	2.24	34.525	0.83	2.97	27.59								
1650	2.07	34.555	1.01	3.05	27.63								

a) Overlapping second cast.
b) First cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

BROWN BEAR; July 24, 1959; 1500 GCT; 53°56'N, 153°18'W; sounding, 4572 m; wind, 280°, force 4; weather, overcast; sea, slight; wire angle, 00°, 00°. 235-009

0a)	10.52	32.730	6.55	1.27	25.11	0	10.52	32.73	6.55	1.27	25.11	286	0.00
10	10.50	32.731	6.54	1.29	25.12	10	10.50	32.73	6.54	1.29	25.12	286	0.03
20	10.52	32.734	6.52	1.28	25.11	20	10.52	32.73	6.52	1.28	25.11	286	0.06
30	9.98	32.843	6.52	1.33	25.29	30	9.98	32.84	6.52	1.33	25.29	270	0.09
50	4.80	32.887	7.17	1.72	26.04	50	4.80	32.88	7.17	1.72	26.04	198	0.13
75	3.68	32.999	6.51	2.06	26.24	75	3.68	32.99	6.51	2.06	26.24	179	0.18
100	3.79	33.366	4.87	2.31	26.53	100	3.79	33.36	4.87	2.31	26.53	152	0.22
125	3.90	33.792	3.22	2.87	26.86	150	4.07	33.91	1.62	3.26	26.93	114	0.29
150	4.07	33.913	1.62	3.26	26.93	200	3.95	33.36	0.87	3.39	26.51	155	0.36
175	4.02	33.965	1.24	3.10	26.98	250	3.93	34.01	0.51	3.51	27.03	106	0.42
						300	3.82	34.07	0.34	3.26	27.09	101	0.47
175b)	4.00	33.931	1.05	3.12	26.96	400	3.67	34.16	0.34	3.13	27.17	93	0.57
200	3.95	33.360	0.87	3.39	26.51	500	3.50	34.23	0.34	3.10	27.25	87	0.66
250	3.93	34.019	0.51	3.51	27.03	600	3.32	34.27	0.35	3.11	27.30	83	0.74
297	3.82	34.079	0.34	3.26	27.09	700	3.14	34.31	0.35	3.15	27.34	79	0.82
435	3.62	34.194	0.34	3.10	27.20	800	2.98	34.35	0.35	3.17	27.39	75	0.90
636	3.26	34.296	0.35	3.12	27.32	1000	2.75	34.40	0.35	3.07	27.45	70	1.05
836	2.92	34.360	0.36	3.18	27.40	1200	2.51	34.45	0.51	3.04	27.51	65	1.18
1300	2.38	34.486	0.66	3.07	27.55								
1403	2.24	34.517	0.86	3.13	27.58								

BROWN BEAR; July 25, 1959; 1800 GCT; 54°00'N, 158°49'W; sounding, 4187 m; wind, 240°, force 4; weather, intermittent slight drizzle; sea, slight; wire angle, 05°, 02°. 235-010

0a)	10.75	32.493	6.48	0.69	24.89	0	10.75	32.49	6.48	0.69	24.89	307	0.00
10	10.74	32.495	6.50	0.67	24.89	10	10.74	32.49	6.50	0.67	24.89	307	0.03
20	10.78	32.498	6.52	0.65	24.88	20	10.78	32.49	6.52	0.65	24.88	308	0.06
30	10.71	32.518	6.51	0.53	24.91	30	10.71	32.51	6.51	0.53	24.91	306	0.09
50	6.60	32.783	7.03	1.39	25.75	50	6.60	32.78	7.03	1.39	25.75	226	0.15
75	3.98	32.934	6.80	1.81	26.17	75	3.98	32.93	6.80	1.81	26.17	186	0.20
100	3.63	33.125	5.77	2.06	26.35	100	3.63	33.12	5.77	2.06	26.35	169	0.24
125	4.08	33.523	3.57	2.69	26.62	150	4.12	33.70	2.38	2.92	26.76	130	0.32
150	4.12	33.708	2.38	2.92	26.76	200	4.05	33.91	0.95	3.20	26.94	114	0.38
						250	4.00	33.99	0.69	3.23	27.01	108	0.43
171b)	4.08	33.872	1.32	2.98	26.90	300	3.92	34.06	0.49	3.13	27.07	103	0.49
						400	3.78	34.14	0.43	3.15	27.15	96	0.59
175a)	4.09	-	-	-		500	3.62	34.20	0.39	3.14	27.21	91	0.68
						600	3.43	34.25	0.36	3.11	27.27	86	0.77
195b)	4.05	33.902	0.98	3.19	26.93	700	3.25	34.29	0.36	3.10	27.32	82	0.85
244	4.01	33.984	0.72	3.25	27.00	800	3.06	34.34	0.38	3.15	27.38	76	0.93
294	3.93	34.050	0.49	3.13	27.06	1000	2.72	34.42	0.55	3.22	27.47	68	1.08
490	3.64	34.204	0.39	3.15	27.21	1200	2.47	34.47	1.10	3.12	27.53	63	1.21
737	3.18	34.319	0.36	3.10	27.34	1500	2.16	34.53	0.84	3.02	27.60	56	1.38
982	2.75	34.415	0.47	3.23	27.46								
1475	2.18	34.532	0.91	3.03	27.60								
1671	2.02	34.564	0.11	3.00	27.64								

BROWN BEAR; July 26, 1959; 1600 GCT; 54°07'N, 163°15'W; sounding, 75 m; wind, 020°, force 3; weather, intermittent slight rain; sea, slight; wire angle, 00°. 235-011

0	8.82	31.989	6.88	0.59	24.81	0	8.82	31.98	6.88	0.59	24.81	315	0.00
5	8.82	31.987	6.85	0.51	24.81	10	8.84	31.98	6.84	0.50	24.80	316	0.03
10	8.84	31.985	6.84	0.50	24.80	20	8.73	31.98	6.91	0.53	24.82	314	0.06
20	8.73	31.982	6.91	0.53	24.82	30	8.56	31.98	6.91	0.50	24.85	312	0.09
30	8.56	31.980	6.91	0.50	24.85	50	4.43	32.24	6.55	1.59	25.57	242	0.15
50	4.43	32.248	6.55	1.59	25.57								
65	4.74	32.414	6.14	1.71	25.68								

a) Overlapping second cast.
b) First cast.

UW BB-235

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m
235-012	BROWN BEAR; July 26, 1959; 2200 GCT; 54°17'N, 164°32'W; sounding, 95 m; wind, 050°, force 4; weather, fog; sea, slight; wire angle, 00°.												
0	8.39	31.772	6.99	0.44	24.71	0	8.39	31.77	6.99	0.44	24.71	325	0.00
5	8.34	31.777	7.02	0.45	24.71	10	8.29	31.78	7.02	0.45	24.73	323	0.03
10	8.29	31.784	7.02	0.45	24.73	20	7.68	31.91	6.86	0.61	24.92	305	0.06
20	7.68	31.913	6.86	0.61	24.92	30	6.47	32.24	6.60	1.12	25.34	265	0.09
30	6.47	32.240	6.60	1.12	25.34	50	6.50	32.30	6.60	1.18	25.38	261	0.14
50	6.50	32.309	6.60	1.18	25.38	75	6.44	32.33	6.61	1.21	25.41	258	0.21
75	6.44	32.333	6.61	1.21	25.41								
235-013	BROWN BEAR; July 27, 1959; 0000 GCT; 54°18'N, 164°54'W; sounding, 86 m; wind, 100°, force 2; weather, cloudy; sea, slight; wire angle, 00°.												
0	7.35	32.426	7.35	0.86	25.36	0	7.35	32.42	7.35	0.86	25.36	262	0.00
5	7.18	32.446	7.39	0.91	25.40	10	7.07	32.46	7.17	0.97	25.43	256	0.03
10	7.07	32.466	7.17	0.97	25.43	20	6.84	32.48	6.97	1.42	25.48	251	0.05
20	6.84	32.484	6.97	1.42	25.48	30	6.72	32.51	6.84	1.03	25.52	248	0.08
30	6.72	32.518	6.84	1.03	25.52	50	6.00	32.59	6.55	1.46	25.67	233	0.12
50	6.00	32.592	6.55	1.46	25.67	75	5.66	32.62	6.37	1.62	25.74	227	0.18
75	5.66	32.626	6.37	1.62	25.74								
235-014	BROWN BEAR; July 28, 1959; 2300 GCT; 54°09'N, 166°31'W; sounding, 1006 m; wind, 010°, force 2; weather, partly cloudy; sea, smooth; wire angle, 00°, 00°.												
0a)	7.78b)	32.515	6.80	1.19		0	7.78	32.51	6.80	1.19	25.37	261	0.00
10	7.39b)	32.541	6.86	1.16		10	7.39	32.54	6.86	1.16	25.45	254	0.03
20	7.32	32.561	6.86	1.22	25.48	20	7.32	32.56	6.86	1.22	25.48	252	0.05
30	7.24	32.620	6.78	1.16	25.54	30	7.24	32.62	6.78	1.16	25.54	246	0.08
50	4.95	32.838	6.06	1.94	25.99	50	4.95	32.83	6.06	1.94	25.99	204	0.12
75	4.65	32.963	5.66	1.99	26.12	75	4.65	32.96	5.66	1.99	26.12	191	0.17
101	4.50	33.040	5.31	1.86	26.20	100	4.51	33.04	5.31	1.86	26.20	184	0.22
126	3.99	33.067	5.67	1.97	26.27	150	4.02	33.12	5.56	2.19	26.31	173	0.31
150	4.02	33.125	5.56	2.19	26.31	200	3.68	33.23	5.66	2.39	26.43	162	0.39
						250	3.62	33.34	5.22	2.44	26.53	153	0.47
171c)	3.96	33.211	5.46	2.20	26.39	300	3.74	33.47	4.27	2.52	26.62	145	0.54
						400	3.68	33.76	2.55	2.84	26.85	123	0.68
177a)	3.95	33.203	5.39	2.40	26.38	500	3.59	33.97	1.41	3.03	27.03	108	0.79
						600	3.44	34.08	1.02	3.03	27.13	98	0.90
195c)	3.70	33.227	5.66	2.39	26.42	700	3.28	34.18	0.75	3.03	27.23	90	0.99
244	3.60	33.329	5.34	2.43	26.51	800	3.11	34.26	0.60	3.03	27.31	83	1.08
293	3.74	33.453	4.41	2.49	26.60								
490	3.60	33.966	1.46	3.03	27.02								
737	3.22	34.212	0.68	3.03	27.26								
959	2.80	34.356	0.60	3.04	27.41								
235-015	BROWN BEAR; July 29, 1959; 1800 GCT; 56°15'N, 167°07'W; sounding, 113 m; wind, 340°, force 5; weather, fog; sea, slight; wire angle, 10°.												
0	8.33	31.557	6.97	-	24.54	0	8.33	31.55	6.97		24.54	340	0.00
10	8.34	31.566	6.89	0.38	24.55	10	8.34	31.56	6.89	0.38	24.55	340	0.03
20	7.16	31.622	7.79	0.49	24.76	20	7.16	31.62	7.79	0.49	24.76	320	0.07
30	3.44	31.850	8.29	0.58	25.36	30	3.44	31.85	8.29	0.58	25.36	263	0.10
49	1.86	32.156	6.04	2.03	25.72	50	1.86	32.15	6.04	2.03	25.72	228	0.14
74	1.88	32.162	6.00	2.00	25.73	75	1.88	32.16	6.00	2.00	25.73	227	0.20
99	1.86	32.157	5.90	2.06	25.72								

a) Overlapping second cast.
b) From bathythermograph; values used in interpolation.
c) First cast.

OBSERVED					COMPUTED	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	cl/ton	dyn m

235-016

BROWN BEAR; July 30, 1959; 1800 GCT; 59°04'N, 167°11'W; sounding, 46 m; wind, 340°, force 3; weather, fog; sea, slight; wire angle, 00°.

0	5.55	31.366	7.25	0.91	24.76	0	5.55	31.36	7.25	0.91	24.76	320	0.00
5	5.56	31.367	7.25	0.89	24.76	10	5.54	31.36	7.25	0.93	24.76	320	0.03
10	5.54	31.368	7.25	0.93	24.76	20	5.52	31.36	7.25	0.93	24.76	320	0.06
20	5.52	31.368	7.25	0.93	24.76	30	5.42	31.37	7.25	0.95	24.78	318	0.10
30	5.42	31.371	7.25	0.95	24.78								

235-017

BROWN BEAR; July 31, 1959; 1800 GCT; 61°40'N, 167°35'W; sounding, 29 m; wind, calm; weather, overcast; sea, calm; wire angle, 00°.

0	6.36	30.657	7.14	0.85	24.10	0	6.36	30.65	7.14	0.85	24.10	382	0.00
5	6.36	30.655	7.17	0.88	24.10	10	6.36	30.67	7.16	0.93	24.12	381	0.04
10	6.36	30.673	7.16	0.93	24.12	20	4.79	30.90	7.26	0.94	24.48	347	0.07
20	4.79	30.907	7.26	0.94	24.48								

Corrigenda

GENERAL NOTES

1. HBL (formerly POFI)
   The data of the Bureau of Commercial Fisheries, Honolulu (HBL), for the years 1953, starting with Cruise 21, through 1958 except NORPAC (see the 1955 volume for corrected data, Corrigenda: NORPAC Data Volume) have been corrected prior to publication in this series for an error in depth calculation reported by Thomas S. Austin (1962). (This error had been made in the calculation of all data of the RV Hugh M. Smith and RV Charles H. Gilbert reported in Special Scientific Reports, U. S. Fish and Wildlife Service, Fisheries Nos. 168, 180, 201, 217, 238, 252, 315, 358 and part of 164.) The recalculations of the data were made through the facilities of the IGY World Data Center A, Oceanographic Archive, Agricultural and Mechanical College of Texas. Interpolation for values at standard depths was performed by a machine program that fitted a parabola to the four observed values surrounding the desired standard depth (two above and two below), to pass through the two inner observed values and to be a least-squares fit to the two outer observed values. Re-editing by the Bureau of Commercial Fisheries, Honolulu, of these machine calculations was done by comparing them with characteristic curves and then making adjustments for any peculiarities introduced by the machine interpolations where points were widely scattered.

2. BT Charts
   All BT charts are subject to some error because BT data for past years continue to be submitted for processing, thus changing the amounts shown on the charts in various areas. In the case of the charts of the North and South Pacific for 1955, 1941-1955, 1956 and 1941-1956 it is known that some observations of the Pacific Oceanographic Group and the Royal Canadian Navy were omitted. However, these observations for 1955 and 1956 have been incorporated in the cumulative charts for later years.

PRE-1949

1. Preface
   End of second paragraph, change to read: United States Coast Guard and United States Navy Hydrographic Office, Washington, D. C.

2. Contents, Charts
   Item 5. Station positions of R/V Catalyst, University of Washington, and USCGC Chelan, U. S. Coast Guard
   Item 6. Station positions, close pattern off Washington, Oregon and California, of R/V Catalyst

3. Tables
   Item 3. Observations of R/V Catalyst and USCGC Chelan

4. Pages xii and xiii
   a. Correct R/V Catalyst entry: Under "Number and Depth of Hydrographic Stations, 1000-2000 m": 24 (not 36) and total 129.
   b. Following Catalyst, insert new line: USCGS Chelan, UW/USCG, 25 vi-13 vii 1935, 12 obs at 1000-2000 m, total obs, 12, O_2

5. Page xxviii
   Chart 5. See Charts 5A and 5B which include five new R/V Catalyst stations, observations by both USCGC Chelan and R/V Catalyst, and corrected positions of Stations 24 through 29 (E longitude, not W).

6. Page xxix
   Chart 6. Caption should read: Station positions, close pattern off Washington, Oregon and California, of R/V Catalyst

7. Page 17
   a. Typeset heading in box at top of page should read: Observations of R/V Catalyst and USCGC Chelan
   b. Fourth station heading should read: Barkley Sound Station 32-4

8. Page 19
See insert, page 19A, which contains five additional Catalyst stations not available at time of publication.

9. Pages 20, 21 and 22
Change agency/cruise identification label to read: UW/USCG
USCGC CHELAN
(Note: Gulf of Alaska Stations 35-1 through 35-6 and Aleutian Islands and Bering Sea Stations 35-1 through 35-6 were made by USCGC Chelan, not R/V Catalyst.)

10. Page 23
Change agency/cruise identification label to read: UW/USCG
USCGC CHELAN
R/V CATALYST

11. Page 87
Agency/cruise identification should be added at top right: USNHO/SIO
USS HANNIBAL

1951

1. Preface
Change the second sentence of the last paragraph to read: For each oceanographic station, values of temperature, salinity, oxygen, phosphate or silicate are tabulated at observed and at standard depths.

2. Page xxxvii
Following PO_4-P, add new section: SiO_3-Si Concentration of dissolved silicon in microgram atoms per liter (μg at/L) or micromoles per liter.

1955

1. Page xvii
The correct entries in the column, "Depth Determination, No. P therms/btl," should be:

BB-108	2
JNC-23	1-2
PAR	2
MIT-2	2

2. Page xvii
Correct "w" footnote to read: (Cary and Beckman, 1941).

3. Page xix
Bibliography, Literature Cited in Introduction: CARY, H. H., and ARNOLD O. BECKMAN should be second entry in lieu of present incorrect fourth entry of GARY and BECKMAN.

4. Page xxxvii
Chart 20. A revised chart is enclosed (original chart based on incomplete tabulations in most squares).

NORPAC

1. HBL
The POFI (HBL) data presented on pages 227-256 were published before being corrected for an error in depth calculation reported by Thomas S. Austin (1962)--see General Notes of this Corrigenda. The corrected POFI NORPAC data have been published in Oceanic Observations of the Pacific: 1955, pages 449-477 (Corrigenda: NORPAC Data Volume).

	Page No.	Station	Property	Depth	Published Value	Corrected Value
2.	54	119	δ_T	30	274.2	374.2
			ΔD	700	(1.443)	(1.143)
3.	85	25	Obs. S	68	33.40	33.40r
4.	93	534	Obs. S	150	35.70	34.70
			Interp. S	150	35.70	34.70
			σ_t	150	24.75	24.00
			δ_T	150	321	392
			ΔD	150	0.760	0.777
				200	0.922	0.957
				300	1.204	1.239
				400	1.428	1.463
				500	1.606	1.649
				600	1.755	1.799
				700	1.879	1.923
				800	1.989	2.033
				1000	2.179	2.223
5.	103	565	Interp. Z		711	700
6.	165	463	Date		Aug. 13	Aug. 18
7.	166	467	Position, Long.		48°08'E	148°08'E
8.	281	75	ΔD	400	5.85	6.85
9.	282	77	Obs. S	147	33.93	33.39
10.	287	9	ΔD	800	0.038	0.938
11.	289	16	Time		644-1929 GCT	1644-1929 GCT
12.	290	19	Date		Aug. 5	Aug. 6
13.	294	29	δ_T	25	141	241
14.	309	10	δ_T	400	142	165
				500	135	142
15.	320	42	σ_t	75	23.27	23.13
				150	24.82	24.62
				500	26.55	26.65
			δ_T	75	462	475
				150	314	332
				500	150	140
			ΔD	75	0.378	0.379
				100	0.487	0.490
				150	0.670	0.677
				200	0.827	0.839
				300	1.098	1.109
				400	1.302	1.312
				500	1.818	1.473
				600	2.056	1.607
				700	2.168	1.719
				800	2.268	1.819
				1000	2.442	1.992
				1200	2.596	2.144
16.	323	50	Obs. S	272	35.72	34.72
17.	329	110-6	δ_T	75	198.3	178.3
18.	356	66	Date		X-2	IX-2

1956

1. Contents, Charts
   The title of Chart 22 is incomplete; 144 should be inserted following 143 in the listing of Brown Bear cruises.

2. Page xv
   The correct entry in the column, "Depth Determination, No. P therms/btl," for all UW cruises should be: 2.

3. Page xxxv
   The caption to Chart 22 should read: Station positions, University of Washington, Cruises 139, 142, 143, 144 and 151 of RV Brown Bear and Cruise 28 of RV John N. Cobb

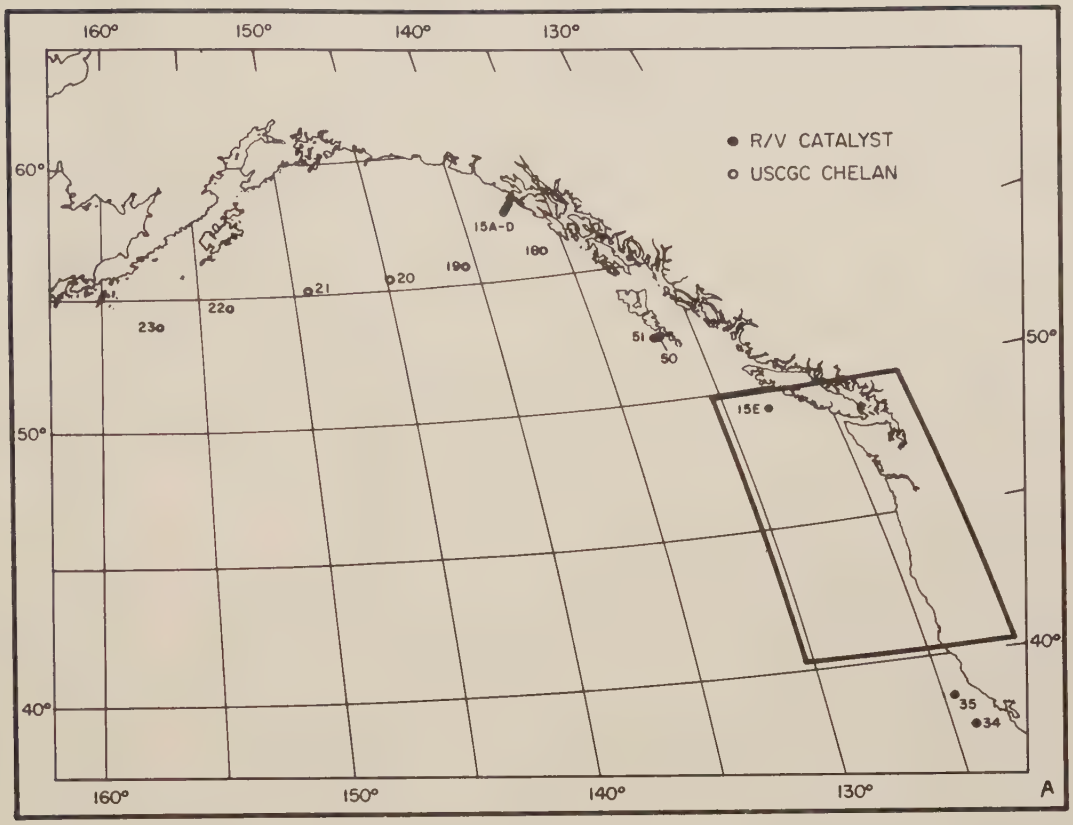

CHART 5A. Station positions of R/V Catalyst, University of Washington, 18 July 1932 to 9 August 1941, and USCGC Chelan, U. S. Coast Guard, 25-28 June 1935

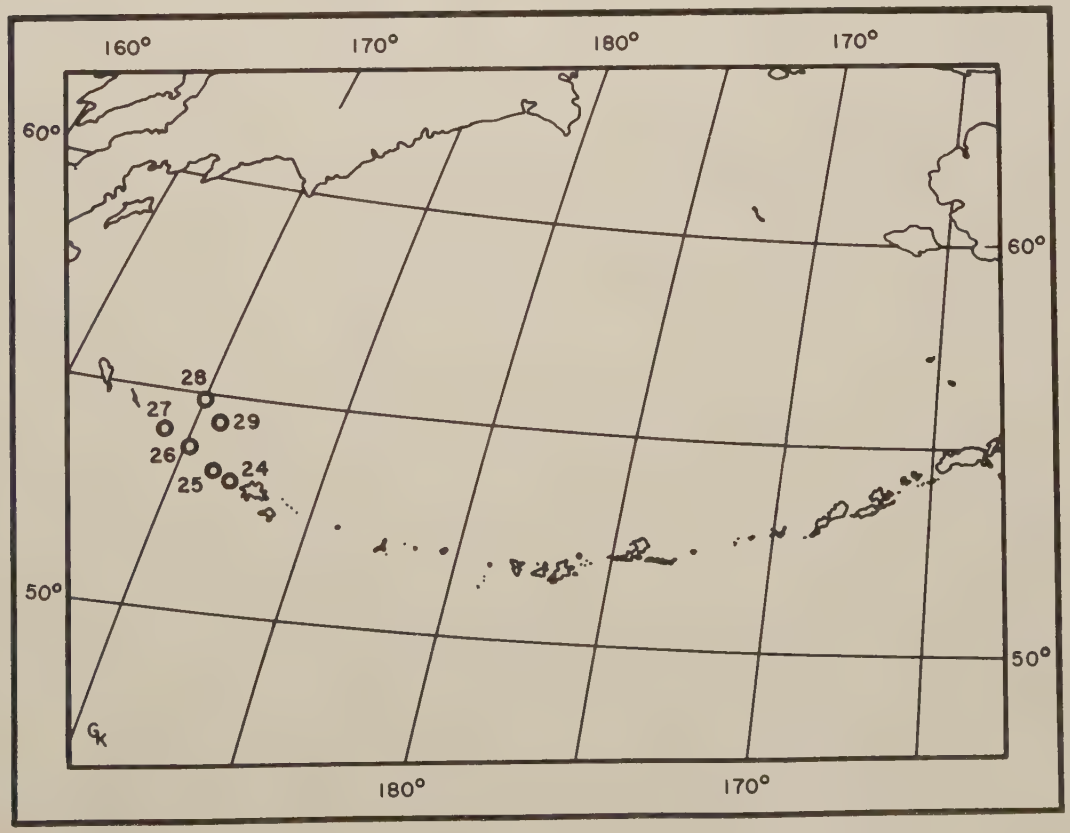

CHART 5B. Station positions of USCGC Chelan, U. S. Coast Guard, 12-13 July 1935

OBSERVED							COMPUTED
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	NO_3-N µg at/L	σ_t g/L
Gulf of Alaska Station 32-1; September 1, 1932; 1700 GCT; 58°03'N, 136°50'W.							GA 32-1 (15A)
0	13.38	5.91	0.19	7	-	0.77	23.75
10	13.40	5.88	0.22	10	-	1.61	23.81
25	11.40	5.80	0.67	14	0.36	0.91	24.25
50	8.77	5.22	0.95	24	0.50	4.12	24.98
100	6.84	4.92	1.51	32	0.04	7.6	25.44
200	6.00	-	1.51	42	0.17	0.91	26.63
300	5.15	1.64	2.21	70	-	-	26.79
Gulf of Alaska Station 32-2; September 1, 1932; 2030 GCT; 47°56'N, 137°04'W.							GA 32-2 (15B)
0	13.08	5.91	0.28	7	-	0.49	23.72
10	13.20	5.91	0.28	10	-	0.35	23.87
25	11.19	4.95	0.47	17	0.22	2.09	24.26
50	8.75	5.22	0.63	24	-	4.40	24.93
100	6.65	5.43	0.63	28	-	6.28	25.56
200	6.09	2.90	0.63	56	-	10.1	26.56
300	5.81	1.09	2.27	84	-	13.1	26.69
Gulf of Alaska Station 32-3; September 2, 1932; 0000 GCT; 57°49'N, 137°19'W.							GA 32-3 (15C)
0	11.82	5.89	0.25	4	-	0.49	23.84
10	11.88	6.07	0.28	10	0.03	0.35	23.85
25	9.81	5.43	0.72	17	0.31	8.10	24.42
50	7.95	4.66	0.88	31	-	4.26	25.02
100	6.61	4.80	0.76	35	-	4.40	25.60
165	5.93	2.83	2.37	45	0.04	9.6	26.29
Gulf of Alaska Station 32-4; September 2, 1932; 0400 GCT; 57°42'N, 137°33'W.							GA 32-4 (15D)
0	12.63	5.77	0.13	10	0.02	0.49	24.07
10	12.70	5.86	0.13	12	0.05	0.28	24.06
25	12.28	5.63	0.13	13	0.10	0.49	24.13
50	7.50	5.39	0.79	23	-	3.77	25.22
100	7.10	5.06	1.10	30	-	5.17	25.33
200	6.02	4.92	1.26	35	-	8.3	25.84
300	5.83	2.48	1.83	56	0.12	13.1	26.61
500	4.60	1.29	2.05	73	-	12.1	26.85
600	4.25	0.94	2.21	77	-	13.1	26.96
700	3.91	0.90	2.27	80	-	13.9	26.99
800	3.81	0.53	2.46	107	-	15.1	27.12
900	3.50	0.43	2.37	107	-	13.5	27.18
1000	3.55	0.47	2.21	107	-	13.9	27.15
1500	2.78	0.47	2.14	107	-	15.8	27.22
1900	3.40	0.37	2.33	114	-	14.5	27.20
Pacific Ocean Station 33-1; July 4, 1933; 1850 GCT; 49°20'N, 127°59'W.							PO 33-1 (15E)
0	12.60						23.89
25	12.29						24.19
50	8.35						25.26
100	7.06						25.89
200	6.91						26.80
300	6.11						26.95
400	5.34						27.13
500	4.88						27.14
600	4.49						27.19
700	4.19						27.27
800	3.91						27.39
900	3.53						27.47
1000	3.37						27.58
1100	3.19						27.47
1200	3.17						27.29
1500	2.46						27.64
2000	1.94						27.73

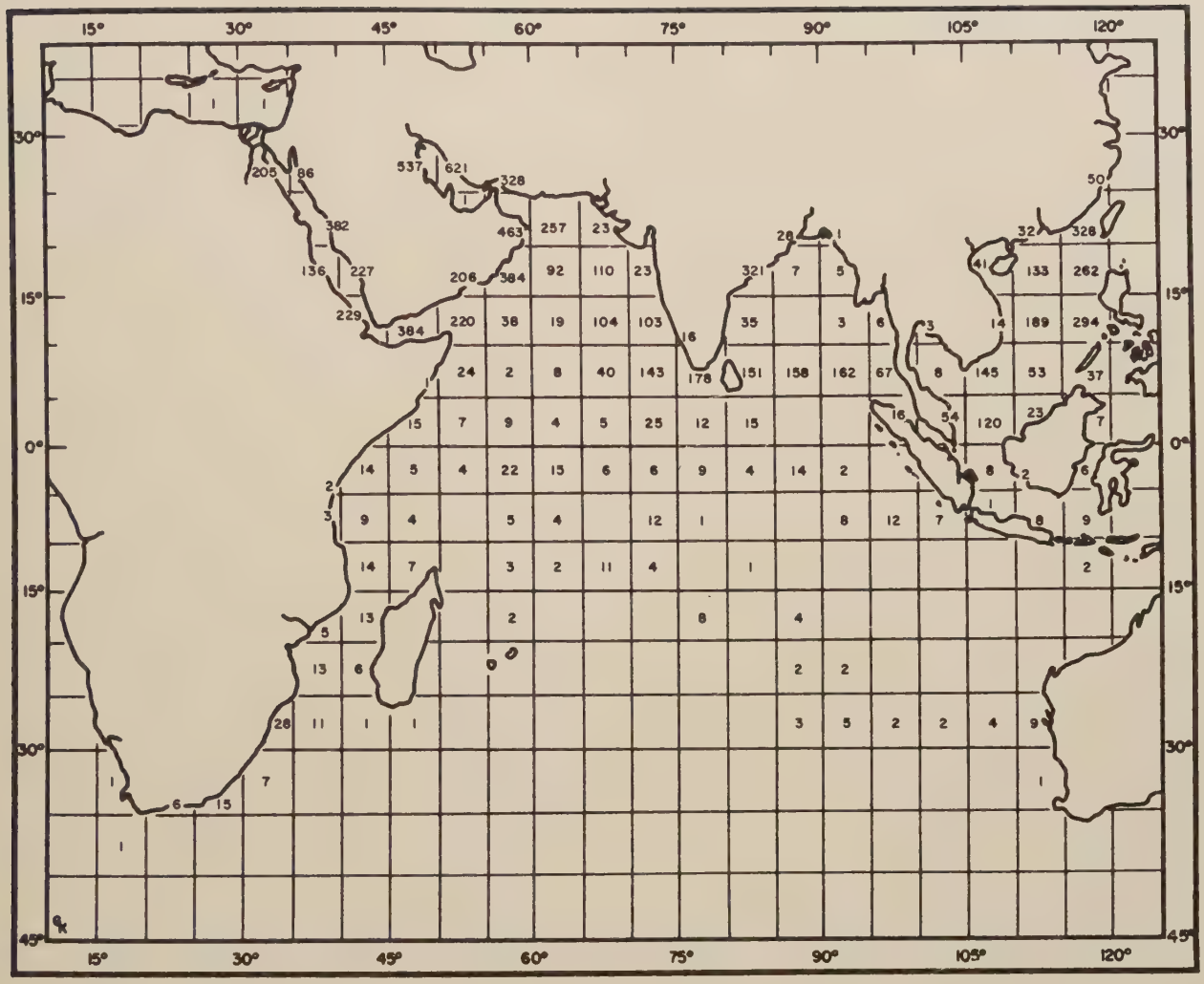

CHART 20. Bathythermograph observations, Indian Ocean, 1941-1955; total, 8,835

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